

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
5 July 2001 (05.07.2001)

PCT

(10) International Publication Number
WO 01/48656 A2

(51) International Patent Classification⁷: G06F 17/60

(74) Agent: WILLE, David, G.; Baker Botts L.L.P., 2001 Ross Avenue, Dallas, TX 75201-2980 (US).

(21) International Application Number: PCT/US00/34022

(22) International Filing Date:
14 December 2000 (14.12.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/173,573 29 December 1999 (29.12.1999) US

(71) Applicant: EBREVIATE, INC. [US/US]; Attn: Intellectual Property, Legal Affairs, 5400 Legacy Drive, H3-A3-05, Plano, TX 75024 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— Without international search report and to be republished upon receipt of that report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(72) Inventors: SLAIGHT, Thomas, H.; 41 Walworth Avenue, Scarsdale, NY 10583 (US). NORMAN, Alan, R.; 20 Gowan Lane, Aurora, Ontario L4G 4X6 (CA). KING, Philip, W., IV; 289 Broadway Avenue, Toronto, Ontario M4P 1W2 (CA). BURTON, Niul, A.; 3059 Sandstone Road, Alamo, CA 94507 (US).

(54) Title: SOURCING SYSTEM AND METHOD

(57) Abstract: One aspect of the invention is an electronic auction system. The electronic auction system comprises computer software that is operable to receive multiple parameter bids on at least one product from a plurality of vendors. The software is further operable to calculate the total cost of the product to the purchaser in response to each vendor's bid according to a total cost formula.

WO 01/48656 A2

SOURCING SYSTEM AND METHOD

TECHNICAL FIELD OF THE INVENTION

This invention relates generally to a sourcing system and method, and more particularly to a sourcing system and method for purchasing products or services using a multi-
5 parameter auction.

BACKGROUND OF THE INVENTION

Corporations, businesses, organizations, governmental agencies and other entities regularly purchase a variety of
10 office, industrial, manufacturing, computer, communication and other products, systems, goods, supplies, equipment and services (individually and collectively referred to herein for brevity as "products"). The process for awarding contracts for such purchases is often lengthy and expensive.
15 Transactions are sometimes complicated by discount, delivery, installation, training, maintenance, warranty and other important variables which are often negotiated before the transaction is finalized. Purchasers typically conduct negotiations with different vendors to obtain the best
20 products for the best price.

Some entities purchasing such products establish in-house purchasing departments or out-source the purchasing responsibilities to consultants. These purchasing specialists employ well established procedures for obtaining
25 product specifications, pricing and other important information from the vendors and comparing the products offered by vendors. These procedures may include using conventional tools such a request for information ("RFI") and a request for proposal ("RFP").

More recently, certain entities have implemented on-line auctions to facilitate the purchase of certain types of products. Existing auction systems generally focus on price of a product as determining the outcome of the auction, rather than the total cost including price plus the other costs incurred in using, operating, or otherwise incurred in the ownership or disposal of the products to the purchaser.

SUMMARY OF THE INVENTION

One aspect of the invention is an electronic auction system. The electronic auction system comprises computer software that is operable to receive multiple parameter bids on at least one product from a plurality of vendors. The software is further operable to calculate the total cost of the product to the purchaser in response to each vendor's bid according to a total cost formula. Other aspects of the invention will be described below.

The invention has several important technical advantages. Various embodiments of the invention may have some, none, or all of these advantages. The invention allows an entity to purchase products using an auction process that takes into account a variety of variables of interest to the purchaser other than price. Other parameters that may be factored into a total cost for a particular product may include, but are not limited to, discount, delivery, installation, training, maintenance, switching costs, and warranties. The invention thus allows a purchaser to efficiently take multiple parameters into account when making a purchase so as to obtain a more desirable outcome when purchasing products. The invention may also facilitate competition in bidding by optionally providing feedback to suppliers during the bidding process.

In some instances, a purchaser may wish to adjust the total cost formula during the auction to test different weighting of various factors.

5 BRIEF DESCRIPTION OF THE DRAWINGS

For a more complete understanding of the present invention and the advantages thereof, reference is now made to the following descriptions taken in conjunction with the accompanying drawings in which:

10 FIGURE 1 is a flow diagram of an example sourcing method;

FIGURE 2 is a flow diagram of an example auction planning process;

15 FIGURE 3 is a flow diagram of an example RFI and RFP development, review and issue process;

FIGURE 4 is a flow diagram of an example auction execution process;

20 FIGURE 5 is a flow diagram one example of an auction set up process that may be used in accordance with the invention;

FIGURE 6 is an illustration of an example master table search, selection and creation interface accessible by the implementor;

25 FIGURE 7 is an illustration of an example user master information input interface accessible by the implementor;

FIGURE 8 is an illustration of an example product or category master information input interface accessible by the implementor;

30 FIGURE 9 is an illustration of an example sub-product or sub-category master input information interface accessible by the implementor;

FIGURE 10 is an illustration of an example parameter master information input interface accessible by the implementor;

FIGURE 11 is an illustration of an example constants master information input interface accessible by the implementor;

FIGURE 12 is an illustration of an example auction search, selection and creation interface accessible by the implementor;

FIGURES 12B and 12C are illustrations of an example auction identification and scheduling interface accessible by the implementor;

FIGURE 13 is an illustration of an example category assignment interface accessible by the implementor;

FIGURE 14 is an illustration of an example vendor assignment interface accessible by the implementor;

FIGURE 15 is an illustration of an example sub-category assignment interface accessible by the implementor;

FIGURES 16A and 16B are illustrations of an example parameter setup interface accessible by the implementor;

FIGURE 17 is an illustration of an example constant assignment and setup for calculating total costs interface accessible by the implementor;

FIGURE 18 is an illustration of an example subcategory assignment interface accessible by the implementor;

FIGURES 19A and 19B are illustrations of an example formula to parameter assignment interface accessible by the implementor;

FIGURES 20A, 20B and 20C are illustrations of examples of total cost formulas for telemarketing services, printers and office supplies, respectively;

FIGURES 21A and 21B are illustrations of an example report assignment interface accessible by the implementor;

FIGURES 22A and 22B are illustrations of an example auction verification and notification interface accessible
5 by the implementor;

FIGURE 23 is an illustration of an example auction management interface accessible by the implementor;

FIGURE 23A is an illustration of an example purchase accessible interface which enables the purchaser to view the
10 total cost formula;

FIGURE 24 is an illustration of an example auction activity viewing interface accessible by the implementor and the purchaser;

FIGURES 25A and 25B are illustrations of an example
15 vendor accessible interface which enables the vendor to enter the vendor's bids for the multiple parameters during the auction and select other features provided to the vendor by the system;

FIGURE 26 is an illustration of an example purchaser
20 accessible interface which enables the purchaser to view bids entered by the vendors on the multiple parameters, make adjustments thereto during the auction and select other features provided to the purchaser by the system;

FIGURE 27 is an illustration of an example purchaser
25 accessible interface for displaying bid activity to the purchaser during the auction;

FIGURE 28 is an illustration of an example interface having an example of a stock graph displaying bid activity;

FIGURE 29 is an illustration of an example savings
30 graph;

FIGURE 30 is an illustration of an example alternative savings graph;

FIGURE 31 is an illustration of an example alternative savings graph;

FIGURE 32 is an illustration of an example interface having a vendor pricing feedback graph;

5 FIGURE 33 is an illustration of an example interface having an alternative vendor pricing feedback graph;

FIGURE 34 is an illustration of an example interface having an alternative vendor pricing feedback graph;

10 FIGURE 35 is an illustration of an example interface having an alternative vendor pricing feedback graph;

FIGURE 36 is a schematic diagram of an example architecture of software for implementing the system and method of the present invention; and

15 FIGURE 37 is a schematic diagram of an example physical network for implementing the system and method of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

20 The preferred embodiment of the present invention and its advantages are best understood by referring to FIGURES 1-37 of the drawings, like numerals being used for like and corresponding parts of the various drawings.

25 The sourcing system and method of the present invention generally enable a purchaser to use an electronic bidding process to purchase products. Optionally, a third party implementor may assist a purchaser to obtain information on products offered by a plurality of vendors, compare the products offered by the plurality of vendors based on the plurality of parameters, and conduct a competitive total
30 cost bidding process or auction to obtain bids from the vendors on a plurality of pre-defined parameters to determine the best comparable total cost for the selected

products. The implementor could also be the purchaser itself.

The sourcing system and method of the present invention may be used for the purchase of products, a category or a subcategory of products. For simplicity, the description below focuses on downward auctions where the purchaser is trying to obtain the lowest total cost; however, the present invention could also be adapted for upward auctions where a vendor is trying to sell products at the highest total cost to one of several purchasers. In such a case, multiple parameters from the seller's perspective (including but not limited to those discussed above and below from the buyer's perspective) could be accounted for in a total cost formula. The seller would simply use the software to obtain the highest possible total cost.

A category may refer to a group of various products or services such as commodity products or complex purchase services. Subcategories may include further subclassification of a category. Each category or subcategory may have multiple parameters associated with it. For example, a category may represent a subassembly, and the sub-categories may include the associated jobs (i.e., molding, machining, stamping, etc.). As another example, a company seeking bids to supply copy machines may have a copy machine category with subcategories such as heavy use, medium use, and low use. Parameters for each subcategory might include maintenance, warranty, paper, toner, sorters, etc.

The invention may be used for various purchasing scenarios. For example, it may be used during the initial sourcing of a category (or subcategory) after an RFP has been issued to a screened set of suppliers. It may also be

employed during the re-sourcing of a category (or subcategory) by a purchaser, and in recurring sourcing situations to obtain the best comparable total costs for a category of products on a regular basis. Thus, the auction software could be used separately or in combination with the RFI and RFP processes.

When a purchaser or buyer (referred to herein as a "purchaser") desires to purchase products (i.e., products, systems, goods, supplies, equipment, services or combinations thereof), the purchaser may begin the process by engaging a facilitator, auctioneer or implementor of the system (referred to herein as the "implementor") to assist the purchaser to purchase the products. Alternatively, the implementor may be the purchaser itself.

Overview of Sourcing Process

Referring now to the drawings and in particular to FIGURE 1, an example sourcing method, generally indicated by numeral 10, includes seven general steps. The steps which are discussed in further detail below, generally include: (I) planning the auction 16; (II) developing and issuing an RFI and an RFP 24; (III) issuing specs or bid sheets 20; (IV) executing the auction 22; (V) conducting final negotiations 32; (VI) awarding a contract 28; and (VII) generating a purchase order 30. If the sourcing system is employed to re-source products or in the recurring sourcing of products, steps two and five illustrated in FIGURE 1 may be omitted. It should also be appreciated that if the sourcing system of the present invention is implemented by a purchaser without the assistance of an implementor, the purchaser will perform those steps performed by the implementor. Additional steps may be included or some or

all of these steps excluded without departing from the scope of the invention. The multiple parameter auction method and software may be used independently of this process as well as the processes described in more detail below without
5 departing from the scope of the invention.

Auction Planning Process (Step I)

Referring now to FIGURE 2, the implementor presents the auction concept to the purchaser, as indicated by block 34.
10 This may involve demonstrating the sourcing system and discussing benefits and risks of the sourcing system with the purchaser.

Before developing an auction strategy, the implementor may determine whether an on-line real-time interactive
15 competitive auction can be successfully implemented to source the products, category of products, or subcategory of products as indicated by block 36. Although the discussion in this application frequently refers to the auction as being on-line and real-time, the invention does not need to
20 be used in that manner. For example, the auction does not need to occur on-line. A purchaser or an implementor may obtain paper bids or electronic bids using other software and supply the bid data to the auction software. In addition, the software can be used other than on a real-time
25 basis. The time at which bidders and/or purchasers are able to view the status of the auction may be adjusted such that it is not in real time.

The implementor may evaluate the suitability of the auction for the category using many different criteria, some
30 of which may include: (i) the degree to which the category includes commodity products; (ii) the clarity of vendor equipment specifications; (iii) the number of sub-categories

(i.e., whether there is a large or small number of biddable line items); (iv) whether non-price parameters can be quantified; (v) whether pricing elements ancillary to the base unit cost (warranties, discounts, etc.) are easily
5 defined and benchmarked; (vi) the number of non-price parameters; (vii) whether the value of non-price parameters is significant compared to base unit cost; (viii) the rivalry of the vendor market; (ix) whether there is a sufficient number of vendors for each sub-category; (x)
10 whether the size of purchaser's spend level is large enough to generate significant competition; (xi) whether the costs for changing vendors are minimal; (xii) whether the vendor pool has comparable peers; (xiii) whether the vendor capabilities are similar; (xiv) whether the vendors can be
15 grouped into categories of three to four similar peers, so that separate auctions can be held; (xv) whether logistical issues are minimal; (xvi) whether vendors are familiar with a web browser and email, and have easy internet access; (xvii) whether vendors in all relevant time zones can
20 participate; and (xviii) whether currency and exchange rate issues can be easily managed. It should be appreciated that these criteria are general guidelines for a successful auction candidate, not prerequisites for conducting an auction. In other words, the auction software of the
25 present invention may be used to conduct an auction regardless of these criteria.

As part of the auction planning step, the implementor may identify several (preferably three to four) major cost drivers, as indicated by block 38. It should be appreciated
30 that the number of major cost drivers could vary. The major cost drivers may be used by the implementor to determine the comparable total cost for the products and generally include

the base price plus applicable warranties, ancillary charges, discounts, rebates and other charges or expenditures, which the system identifies as parameters. Such parameters may include items for which a price is charged or other more subjective parameters. Where parameters are subjective, the purchaser and/or implementor may quantify the parameter and assign it a cost based upon the importance of the factor to the purchaser. In addition, one or more formulas may be used to convert a parameter into a cost to be taken into account in a total cost formula. For example, where a purchaser of equipment expects equipment to fail periodically, the mean time to failure for such equipment may be used to calculate the projected cost of the downtime for the equipment (such as, for example, where the downtime causes an assembly line to be halted).

Thus, parameters may either be price or non-price parameters. Examples of price parameters include: (i) base price; (ii) volume discounts; (iii) rebates; (iv) life cycle discounts; (v) utilization charges; (vi) maintenance charges; and (vii) administration charges. Examples of non-price parameters include: (i) delivery timing; (ii) national service coverage; (iii) quality levels; (iv) employee skill levels and training; (v) dedicated account management team resources; (vi) custom reporting services; (vii) online ordering; (viii) length of warranty; and (ix) length of contract. In addition to variable parameters, the cost drivers may also include fixed values such as switching costs or other fixed costs of the supply relationship.

The implementor develops an auction pricing model, as indicated by block 40, as part of planning the auction. In addition to the selection of parameters, the implementor works with the purchaser to select the products or items

that will be bid on by the vendors, which the system identifies as sub-categories. To define the sub-categories, the purchaser identifies the highest impact items for inclusion in the auction (e.g., the ten items that make up
5 80% of the projected spending for the category). The sub-categories are then grouped in logical categories (i.e., sub-categories could represent a set of jobs -- molding, machining, stamping -- associated with the production of a subassembly, and the category could represent the
10 subassembly). For categories with thousands of items, the auction pricing model can be simplified by developing a market basket of representative items. For example, in the office supplies category, the purchaser may select the one hundred items making up the most significant purchases from
15 the thousands of items and group them into ten sub-categories. During the RFP process, the vendors bidding in an auction may provide pricing for each product in the market basket, sub-totaled at the sub-category level. During the auction, the vendors may bid at the sub-category
20 level. This enables the system to handle bidding on a relatively large number of items in a manageable fashion. Bidding could, however, occur at the product level.

Using the selected parameters and sub-categories, the implementor creates a total cost formula for each vendor.
25 The total cost formula may be the same for all participants in an auction or may be specific to each vendor. The ability to use a formula specific to each vendor allows the software to take into account cost items specific to a particular vendor such as the cost of converting from one
30 vendor to another. (For example, there may be costs in setting up accounting/payment systems to take the new vendor into account as well as a cost of physically changing out

equipment.) As part of defining the formula, the implementor determines the unit labels and cost constant assigned to each of the parameters as further explained below. Thus, as defined herein, total cost is the costs to the purchaser for the products or category of products based on the selected parameters and sub-categories.

Planning the auction may also include assessing the category approach, as indicated by block 42. If a category has not been sourced before, a typical approach is to use the RFI and RFP processes. If the category has been sourced before, and the vendor base is well known, then the category re-sourcing or recurring sourcing approaches may be used.

RFI and RFP Development and Issue Process (Step II)

FIGURE 3 illustrates a process for developing, reviewing and issuing an RFI and an RFP. Before developing the RFI, the implementor develops an auction strategy, as indicated by block 44, considering such factors as the: (i) number of auctions; (ii) number of vendors; (iii) auction sequence in the vendor selection process; (iv) pricing model; (v) auction disclosure plan; and (vi) pricing feedback format. This auction strategy guides the development of the RFI and RFP.

The implementor assists the purchaser to develop and issue an RFI to determine the interested vendors in addition to defining the product specifications and requirements, as indicated by block 46. The RFI is typically a relatively short survey sent to a number of potential vendors in a product field or supply line (i.e., a first list of vendors). The vendors receive the RFI and provide a response thereto to the purchaser. The implementor assists the purchaser in evaluating the RFI responses and selecting

vendors based on their responses to the RFI, forming a second screened list of vendors as indicated by block 48. Only those selected vendors on the second list of vendors are sent an RFP.

5 The RFP is developed and issued as indicated by block 50. The RFP generally establishes the auction terms and rules. Factors considered in developing the RFP include defining: (i) equipment/service specifications; (ii) minimum service requirements; (iii) a minimum baseline for the
10 parameters where applicable (e.g., warranties, volume discounts, etc.); and (iv) the scope of the award (e.g., size of award, timing, target number of vendors to be selected, etc).

The purchaser transmits or communicates the RFP to all
15 of the screened or selected vendors on the second list of vendors. The vendors receive and provide a response to the RFP. The implementor assists the purchaser to evaluate the responses to screen and select the vendors based on their responses to the RFP, forming a third list of vendors 14 who
20 will participate in the auction as indicated by block 52. Alternatively, the second list of vendors can simply be allowed to participate in an auction. As noted above, the RFP and RFI process is not required as part of the invention. It should be appreciated that the RFI and RFP
25 may be issued electronically, sent by facsimile, mailed or sent by any other well-known means to the vendors.

After forming and finalizing the third list of vendors 14, the implementor or purchaser sends an auction invitation to the listed vendors as indicated by block 54. The
30 invitation may include, for example: (i) the schedule of key dates for the auction; (ii) the auction vendor manual; (iii) the auction information sheet; (iv) the practice

auction instructions, login ID and password; and (v) any other relevant information regarding the auction. The implementor may prepare all the auction participants for the auction, as indicated by block 56. The implementor may
5 prepare the purchaser by: (i) providing the data requirements and templates to the purchaser; (ii) discussing the purchaser's role; (iii) conducting a practice auction; (iv) establishing the purchaser's onsite auction war room which includes ensuring external internet access; and
10 (v) discussing contingency planning, such as purchaser's loss of internet access, a vendor's loss of internet access, server failure and other potential problems. The implementor may prepare the vendor by: (i) providing an auction help desk having a toll free number and email
15 address; (ii) conducting a vendor information session; (iii) monitoring vendor participation during a practice auction; (iv) troubleshooting technical problems including calling vendors that do not submit bids in the practice auction; and (v) ensuring that the vendors understand the
20 auction process.

Issuing Bid Sheet (Step III)

The purchaser or implementor may provide the vendors with the sub-category specifications and a bid sheet for
25 conducting the auction. The bid sheet is a simplified version of the RFP which includes: (i) subcategories; (ii) parameters; (iii) product specifications; and (iv) minimum service requirements.

30 Executing the On-line Bidding Process (Step IV)

Referring now to FIGURES 4 and 5, the implementor executes the auction by setting up the auction, managing the

5 auction and generating and analyzing one or more final reports based on the auction, as indicated by blocks 58, 60 and 62, respectively. More specifically, setting up the auction may include: (i) updating the master database
10 tables for that auction as indicated by block 64; (ii) creating an auction, as indicated by block 66; (iii) assigning categories for the auction as indicated by block 68; (iv) setting-up the vendors for the auction as indicated by block 70; (v) assigning sub-categories to the
15 categories of the auction as indicated by block 72; (vi) setting-up the parameters and total cost constants for the auction, as indicated by block 74; (vii) assigning sub-categories to the selected vendors for the auction, as indicated by block 76; (viii) assigning a formula for each
parameter to calculate the comparable total cost for each
20 vendor for the auction, as indicated by block 78; and (ix) generating the auction summary and passwords, as indicated by block 80.

25 The discussion below addresses several example interfaces that may be used with the present invention. These interfaces are only examples and other interfaces could be used without departing from the scope of the invention. In addition, the interfaces could accept more or less information and organize the information differently without departing from the scope of the invention.

Updating the Master Database Tables

30 Referring now to FIGURE 6, the system may provide a master database table 90 interface which enables the implementor to add new supplier, category, subcategory, parameter and total cost information to the database. These elements constitute the building blocks of the auction set-

up. To determine if information already exists in the database, the system provides a search interface as illustrated in box 92. The interface enables the implementor to copy and/or modify pre-existing information as well. At any point in the auction set-up, the
5 implementor may return to the master tables by clicking on the navigation bar at the left side of the screen, or by clicking on links to specific master tables.

Although this embodiment of the invention employs
10 categories and subcategories of products, this organization need not be used in accordance with the invention. The invention may encompass any auction software that uses a plurality of parameters, rather than simply cost, to determine the outcome of the auction.

15

User Master Information

Referring now to FIGURE 7, the system may provide a user master information input interface 94 which enables the implementor to input relevant purchaser and/or vendor
20 information for the auction. Relevant user information may include the company's name, address, contact information, e-mail address, time zone, currency, language, company logo, DUNS #, e-mail address, login name, and other implementor defined fields. Additional information could be included or
25 some of this information excluded without departing from the scope of the invention. After the implementor inputs this data, the system stores this information in the appropriate database.

30 Category Master Information

Referring now to FIGURE 8, the system may provide a product or category master information input interface 96

which enables the implementor to create a new category or product in the system database. This interface 96 enables the implementor to input the name of the category or products and a description of the product for the auction in the master tables in the database. After the implementor inputs this information or data, the system stores this information in the appropriate database.

Sub-Category Master Information

If the implementor creates a new category, the implementor may create and assign sub-categories to the new category. The implementor may also create new sub-categories for existing categories. Turning now to FIGURE 9, the system 10 may provide a sub-category master information interface 98 which enables the implementor to input the subcategory information relevant to the auction. In particular, the interface enables the implementor to enter the sub-category name and description of the sub-category. The implementor also selects which categories to add the sub-category to. After the implementor inputs this information or data, the system stores this information in the appropriate database.

Parameter Master Information

The implementor may also set up the plurality of parameters for the total cost formula for the sub-category. Turning now to FIGURE 10, the system provides a parameter (or variable) master information input interface 100 which enables the implementor to input the name of the parameter and a description of the parameters. After the implementor inputs this information or data, the system stores this information in the appropriate database. Such information

may be used to create a total cost formula that takes into account multiple parameters associated with a product.

Constant Assignment Information

5 Turning now to FIGURE 11, the system may provide a constant master information input interface 102 which enables the implementor to input the name and description for constants which may be used in the total cost formula. The implementor inputs the name of the constant, a
10 description of the constant, and selects a parameter to which the constant is assigned. After the implementor inputs this information or data, the system stores this information in the appropriate database.

15 Create/Update an Auction

Referring now to FIGURE 12A, the system may provide an auction search interface 104 which enables the implementor to copy all elements of an existing auction, or modify the auction identification information for an existing auction.
20 To determine if an auction already exists in the database, the system provides a search interface as illustrated in box 105. The interface enables the implementor to modify a selected auction, to copy a selected auction template or structure if desired, or to create an entirely new auction.
25 By copying an auction previously set-up, the new auction includes all the information from the previous auction such as the purchaser, the vendors, all categories, sub-categories, parameters and the constants for the bid formula for determining the total cost.
30 When the implementor selects, copies or creates a new auction, the system provides the implementor an auction identification interface 106 as further illustrated in

FIGURE 12B which enables the implementor to input the auction identification information. The auction identification interface 106 illustrated in FIGURE 12C enables the implementor to input the details concerning a specific auction, including the auction name, name of the purchaser, RFP number, implementor e-mail address, duration of the auction including the start date time and end date time, currency, time zone, duration of extension of the auction in minutes of the auction, maximum number of extensions that will be granted for a particular auction, maximum percentage difference between a vendor's two consecutive bids, minimum percentage difference between a vendor's two consecutive bids, the maximum vendor idle time in minutes after which a vendor will be sent an e-mail message prompting him to bid, the gap between the current lowest bid and vendor's bid which will cause the system to send a message to the vendor to make a more aggressive bid to become the best bidder, and the definition of a new bid which is the elapsed time in minutes between the two latest bids of any two vendors. When the implementor wants to save the changes, the implementor selects the "submit" icon and the system stores the inputted auction information in the master database tables in the database server discussed below.

Category Assignment

To set up the auction, the implementor assigns categories to the auction. FIGURE 13 illustrates an example category assignment interface 108 which enables the implementor to select an auction and categories. The interface enables the implementor to assign selected categories to the auction. After the implementor inputs this

information or data, the system stores this information in the appropriate database. If the implementor has not created a new category or the category does not exist on the system, the implementor may access the category master interface 96
5 through the link on the interface 108.

Vendor Setup

The implementor may also identify the invited vendors who will participate in the auction. Where an auction has
10 no restrictions, any vendor may be allowed to participate. Referring now to FIGURE 14, the system may include a vendor assignment interface 110 which enables the implementor to select an auction and input the list of vendors who will participate in the auction. The implementor selects the
15 vendors from the vendors previously stored on the system database using the vendor master information input interface discussed previously (referred to as "vendor master list"). The implementor selects each invited vendor from the vendor master list so that the invited vendors are displayed in the
20 appropriate box (referred to as "selected vendors"). After the implementor inputs this information or data, the system stores this information in the appropriate database.

Sub-Category Assignment

25 The implementor may also assign sub-categories for each category on which bidding will occur during the auction. Referring now to FIGURE 15, the system may provide a subcategory assignment interface 112 which enables the implementor to select the particular auction, category and
30 associated subcategory. In addition to using interface 112 to select the subcategories for the auction, the implementor may use this interface to define the quantity for each of

the selected sub-categories. After the implementor inputs this information or data, the system stores this information in the appropriate database.

5 Parameter Set-Up

Referring now to FIGURES 16A and 16B, the system may provide a parameter set-up interface 114 which enables the implementor to assign parameters (i.e., variables) to each of the sub-categories and enter baseline values for each
10 parameter. The baseline values are used by the system to calculate the purchaser savings as explained below. Baseline values may reflect, for example, prior spending by the purchaser. This baseline information is not accessible by the vendor. The interface enables the implementor to
15 select the auction, category and sub-category to which the parameters are assigned. The implementor also defines the unit label of measurement and the direction of bidding (upward or downward) for each of the parameters. After the implementor inputs this information or data, the system
20 stores this information in the appropriate database.

Constants Set-Up

The implementor may also establish constants for calculating the total costs. Turning now to FIGURE 17, the
25 system may provide a constants assignment and setup interface 116 which enables the implementor to assign a constant to a selected parameter and define a value for that constant. The interface enables the implementor to select the auction, category, subcategory and parameter for which
30 the constant is assigned. The interface also enables the implementor to select and define a value for each parameter.

After the implementor inputs this information or data, the system stores this information in the appropriate database.

Sub-Category to Vendor Assignment

5 Referring to FIGURE 18, the system provides a subcategory-to-vendor assignment interface 116 which enables the implementor to assign specific sub-categories to the vendors, enter bid values specified by the vendor in the vendor's response to the RFP, and specify which vendors have
10 elected to submit bids for which subcategories. It should be appreciated that some of the vendors may be invited to bid on all the subcategories, while other vendors may be invited to bid on only specific sub-categories. The implementor also uses this interface 108 to enter switching costs (fixed
15 costs to set up non-incumbent vendors) or other supplier-specific fixed costs of the supply relationship. This information may be used in the total cost calculation. The implementor selects the specific auction, category and vendor for which the subcategory is assigned. The sub-
20 categories table enables the implementor to select those sub-categories of interest to each selected vendor from a table of currently available sub-categories for a specified category. After the implementor inputs this information or data, the system stores this information in the appropriate
25 database.

Formula Assignment

Referring now to FIGURES 19A and 19B, the system may provide a formula assignment interface 120 which enables the
30 implementor to input a total cost calculation formula. The interface enables the implementor to assign a formula for each parameter within a sub-category. The individual

parameter formulae are summed to determine the total comparable cost for the sub-category). The total cost formulae may be defined at a unit-cost level, then are multiplied by the total volume. The system calculates the
5 total cost for each vendor using the formulae entered on this interface 110, and the bid values entered by each vendor.

The interface enables the implementor to select the auction, category, subcategory and parameter and assign a
10 formula. This interface 110 also enables the implementor to edit and/or copy the formulae. The system verifies that only one formula is input for each parameter. After the implementor inputs this information or data, the system stores this information in the appropriate database.

15 FIGURES 20A, 20B and 20C provide examples of formulas for each sub-category or category, defining the formulas for converting the vendors' bids to total comparable costs.

Example A

20 FIGURE 20A illustrates a total cost formula for an example sub-category, laser printers. In this example, the total cost is driven by three parameters: price, warranty and toner cost. The total cost calculation is: Price +
Warranty + Transportation cost + (Toner cost * Pages per yr
25 avg), where price, warranty, transportation cost and toner cost are biddable parameters, and "pages per yr avg" is a constant.

Example B

30 FIGURE 20B illustrates a total cost formula for an example sub-category, Tires. In this example, total cost is driven by price and tread life (miles usage per tire). The

total cost calculation is: (Total Miles/Tread Life * Price), where Tread Life and Price are biddable parameters, and Total Miles is a constant (the purchaser's total expected tire usage in miles).

5

Example C

FIGURE 20C illustrates a total cost formula for Telemarketing Services. In this example, total cost is driven by price, volume discounts at two tier levels (\$5M and \$10M) and training costs. The total cost may be calculated under two scenarios. If volume is concentrated with fewer suppliers, the total cost will reflect the volume discounts at \$10M. If a larger number of suppliers is included in the award, the total cost will reflect the volume discounts at \$5M. Whichever scenario the purchaser wishes to test, the total cost calculation will be adjusted as follows: For the \$10M discount scenario, the total cost calculation is: Price + (- volume discount at \$10M * Price) + (Training cost per hour * training hours/total hours), where Price, "volume discount at \$10M" and "Training Cost per hour" are biddable parameters, and "training hours" and "total hours" are constants. For the \$5M discount scenario, the total cost calculation is: Price + (- volume discount at \$5M * Price) + (Training cost per hour * training hours/total hours), where Price, "volume discount at \$5M" and "Training Cost per hour" are biddable parameters, and "training hours" and "total hours" are constants.

Assigning Reports

Referring now to FIGURES 21A and 21B, the system may include a report selection interface 120 to assign a set of reports that will be viewable by the vendors during the

auction, as well as the set of reports that will be viewable by the purchaser during the auction. FIGURES 32-35 illustrate examples of the types of graphs and reports the system may be adapted to provide to pre-selected users.

5 FIGURE 32 provides a vendor bids bar graph displaying the vendors' own bids for each category. FIGURE 33 provides a low bids bar graph displaying both the vendors own bids and the lowest bid for each category. FIGURE 34 provides a stock graph of the entire range of bids from the highest to

10 the lowest bids and marks the lowest bid. FIGURE 25 displays the vendors' position by subcategory. It should be appreciated that the system could be adapted to provide other graphs and other useful information to the vendor. Where desired, some of these reports may be suppressed by

15 the purchaser.

Generating Auction Summary and Password

Referring now to FIGURES 22A and 22B, the system may include an auction verification and notification interface

20 122 the system provides to the auctioneer or implementor at the end of the auction setup. This interface is preferably the last interface displayed in the auction setup mode, enabling the implementor to view a summary of the auction. The implementor can make modifications to the auction by

25 returning to the corresponding pages using the navigation links or buttons provided on the interface 122 as discussed above.

Interface 122 also enables the implementor to print or send auction information. If the auction setup is complete,

30 the implementor can print out a hardcopy of the auction setup. Additionally, the implementor can transmit auction notifications to the participating purchaser and vendors

automatically via email by clicking the "Send Auction Notice" button. The auction notification provides the participants with such information as date, start and end time of the auction. This feature also provides the vendors and purchasers with a user name and password required to access the auction. The users also receive a "View Only" password, so that remote team members may view the auction, without the ability submit bids.

10 Auction Management

The system enables the implementor to monitor and manage the auctions, end an auction and send or broadcast messages to the purchaser or vendors using an online messaging feature provided by the system. Turning now to FIGURES 23 and 23A, the system may provide an auction management interface 124 which enables the implementor to select a specific auction for monitoring and to view specific details of that auction. The interface 124 in FIGURE 23 displays the category and subcategory for the specified auction (i.e., printers and printer cartridges) and shows the current login activity for the auction. The auction management interface also allows the implementor to view the high level purchaser interface 130, the bid information interface 126, the total cost formula display interface 125 illustrated in FIGURE 23A, the analysis section which shows selected reports, and the top supplier monitoring interface 132, which are each described in the purchaser interface section below.

Although not shown in FIGURE 23, the interface 124 may enable the implementor to change or modify erroneous bids as requested by the vendors and approved by the purchaser. The system may also enable the implementor: (i) to send email

or screen messages to one or more purchasers or vendors using the electronic mail device and view a log of all messages sent; (ii) view vendor and purchaser passwords and logon ID's; or (iii) forcibly end the auction if desired.

- 5 The system sends appropriate messages and sounds to all the vendors and the purchaser at the beginning and prior to end of auction. The system may also enable the implementor to transfer HTML data from vendor bidding into a worksheet for carrying out calculations and analysis using this interface.
- 10 Although this embodiment uses HTML data, any type of data could be used without departing from the scope of the invention.

System 10 may transmit messages for various scenarios using an electronic mail device in communication with a central auction management system. Such messages can be broken down into two categories: (i) user specific messages; and (ii) general messages, and can be further classified as automatic and manual messages. Examples of user specific messages include an alert message to a vendor suggesting the best bid, a message indicating that a bid is not within a range defined in the auction set-up or too low; or a message that the vendor is inactive and should participate and bid actively. General messages include, but are not necessarily limited to, broadcasting auction time extensions, auction end time countdowns, etc.

Vendor Interface

Turning now to FIGURES 25A and 25B, the system may provide a vendor accessible interface 128 which displays relevant information enabling the vendor to participate in the auction. This interface 128 enables the vendors to place bids on the various parameters for different sub-

categories in each category. The interface displays the vendor's current bid enables the vendor to view the best bid submitted by another unidentified vendor for each of the parameters. Viewing of the best bid may be suppressed,
5 where desired.

Interface 128 includes a ticker at the bottom of the interface for displaying messages to the vendor and providing useful information to the vendor during the auction. The vendor specific and general messages to the
10 vendor regarding the auction including alert messages to the vendor suggesting the best bid, messages indicating that the vendor's bid is not within a specified range, auction time extensions and auction end time countdowns. The interface may also include a clock that adjusts to the bidder's time
15 zone, that flashes red ten minutes before the auction end time. Interface 128 also includes multiple links that enable the vendor to jump among related vendor interfaces to view bidding information, view reports and graphs, transmit and receive e-mail messages, and view a message log. FIGURE
20 25 discussed above provides an illustration of the bidding interface accessed through the bidding screen link. The e-mail to implementor link enables the vendor to communicate with the implementor using the electronic mail device (i.e., send and receive e-mails). The message log link enables the
25 vendor to view a log of messages transmitted during the auction. The analysis section of the vendor interface allows the vendor to select and view pre-selected real-time graphs and reports, examples of which were described previously in FIGURES 32-35.

Purchaser Interface

Turning now to FIGURE 24, the system may include an activity viewing interface 126 accessible by the purchaser and implementor through the auction management interface 114. Interface 126 displays specific information on a selected auction preferably including the total costs, savings and savings percentage. For the selected auction (i.e., printer auction) shown in FIGURE 24, interface 126 also provides the implementor with auction information on all the vendors participating in the auction and parameters in the selected category. The system also indicates the current best comparable total cost by displaying a low icon and a new bid by displaying a new icon.

Turning now to FIGURE 26, the system may provide a purchaser accessible interface 130 which enables the purchaser to view high-level bid information, view total savings by supplier and make total cost adjustments by supplier to test different scenarios. Interface 130 also includes multiple links that enable the purchaser to view other interfaces to obtain the general bidding information, bidding information of specific vendors, bid details, reports and graphs, transmit and receive e-mail messages, and view a message log.

In FIGURE 27 another illustration of a purchaser accessible interface 132 is provided and is accessed by selecting the "Watch List" link. This interface 132 enables the purchaser to view bids entered by the top five vendors on the various parameters (e.g., the largest vendor in a particular industry and the closest competition). Selecting the bid details link enables the purchaser to view in-depth details on a specific vendor bid. The e-mail to implementor link enables the purchaser to communicate with the

implementor using the electronic mail device (i.e., send and receive e-mails). The message log link enables the purchaser to view a log of messages communicated during the auction. There are also links to access pre-selected
5 reports and graphs, as described previously in FIGURES 28-31.

The system described herein provides only one example of a system that can be used to implement the present invention. Various features described above may be omitted
10 or other features included without departing from the scope of the invention.

General System Structure

Referring now to FIGURES 36 and 37, system 10 includes
15 a central auction management system ("CAMS"), generally designated 150, comprising two central servers which host a web application and the system database. The implementor uses an implementor computer (not shown) to communicate with the CAMS 150. The purchaser uses at least one purchaser
20 computer 152 (which may be remotely located) to communicate with the CAMS 150 (via the internet 154 or other suitable communication methods) to access the auction, view the bidding process in real-time and make adjustments as described above. The vendors each use at least one vendor
25 computer 156 (a plurality of vendors use a plurality of remote computers 156 each of which may be remote) to communicate with the CAMS (via the internet or other suitable communication methods) to enable each of the vendors to transmit bids for the products and to obtain the
30 information on the best total cost submitted by the other vendors participating in the auction. After each vendor transmits a bid, the CAMS 150 determines the total cost for

the vendor using the pre-defined cost formula and enables the implementor and the purchaser to view the vendors' bids.

Communication between the purchaser, vendors and implementor and the CAMS 150 in this embodiment is facilitated via the Internet but could be facilitated using any other suitable communications network 154. (Alternatively, communications may occur using other communications techniques and the relevant data may be manually entered into the CAMS 150 by the purchaser and/or implementor.) Furthermore, while only three remote computers are shown, it should be appreciated that the system 10 can be used by more or less users and in particular at least one purchaser and a plurality of vendors. CAMS 150 may be a Sun Microsystem® or other suitable hardware platform able to support a database server and a web application server. Any other computer may be used, however, without departing from the scope of the invention. In addition, a web server need not be used and the application could be implemented using another type of server without departing from the scope of the invention.

In one embodiment, CAMS 150 includes an auction manager and electronic mail devices, but these may be omitted without departing from the scope of the invention. CAMS 150 includes at least one web application server 158 such as an IBM Websphere or other suitable server. Web server 158 may act as the electronic mail device providing communication between the system 10, and the implementor, purchaser and vendors; in addition to securing the system, providing the system 10 with user authentication, secure socket layer (SSL), CGI Scripting, and encryption. Further, the software that generates the screen interfaces may run on the web server 158. Where a web server is not used, other suitable

software may perform these and other functions. In addition, some of these functions may be omitted.

CAMS 150 may includes at least one storage medium. In the embodiment depicted, database server 158 includes the storage medium and the master database files and is depicted in FIGURE 37 as an Oracle® 8 database server, although other storage mediums could be used. Using a database server provides for database access and security. CAMS 150 may itself be stored on a computer readable storage medium such as a hard disk drive, floppy disk drive, optical disk drive, random access memory, read only memory, a tape drive, of any other storage medium capable of storing computer software.

CAMS 150 may also include an auction manager device that enables the implementor to manage the auction. In one embodiment, the auction management device is an auction engine comprised of a collection of daemon processes operating on the database server 158. These processes monitor the status of all the auctions in the system and start, stop or extend the auctions. The auction engine periodically (for example, once every 60 seconds) checks to see: (i) If any auction category needs to be started and sends an "auction will start message" to all logged in appropriate purchasers and vendors; (ii) if any auction category needs to be started immediately and sends an auction has started message to all such purchasers and vendors; (iii) if any auction category needs to be ended in the next five minutes and sends an auction will end message to all such purchasers and vendors; (iv) if any auction category needs to be ended and sends an auction has ended message to all such purchasers and vendors; and (v) if any auction category needs to be extended and sends an auction

has been extended message to all such purchasers and vendors.

This auction engine also periodically (for example once every 10 minutes) checks to see if there are any auctions
5 that ended recently for which auction reports have not yet been generated. For all such auctions, it generates auction reports and transmits them to the appropriate purchasers and vendors.

FIGURE 37 further reveals the remote purchaser computer
10 152 operably connected to the data network 154, which enables the purchaser to interact with the sourcing system 10 of the present invention. While only one remote computer 152 is shown, more than one computer is contemplated allowing multiple employees of the purchaser to interact
15 with the system 10 and view the on-line bidding process at the same time. While many types of remote computers are contemplated, in one embodiment, the remote computer 152 includes a personal computer running a World Wide Web browser. It is contemplated that the system 10 will not
20 limit the purchaser to one auction, but will enable the purchaser to conduct concurrent on-line bidding or auctions running on multiple browser sessions.

Further, the purchaser's remote computer 152 may include an input/output device, such as a printer, etc.,
25 connected thereto and is operably connected to the telephone/data network 154 via a suitable device. Other I/O devices could be utilized to transfer data between the CAMS 150 and the plurality of remote computers. Further, the remote computer 152 is operably connected to the data
30 network 154 by a connecting device 162 which could include telephone wires, optical fibers, cellular communications, etc.

Two vendor remote computers 156 are shown in FIGURE 37 operably connected to the CAMS 150, which enables the vendors to interact with the sourcing system 10. As provided earlier, while two remote computers 156 are shown, more than two computers 156 corresponding to a plurality of vendors are contemplated, allowing multiple vendors to interact with the system 10 and participate in the auction at the same time. While many types of remote computers are contemplated, in one embodiment, the remote computer 152 comprises a personal computer running a World Wide Web browser. Each of the plurality of remote computers 156 may include an I/O device, such as a printer, etc., connected thereto and are operably connected to the telephone/data network 154 via a suitable device. Other I/O devices could be utilized to transfer data between the CAMS 150 and the plurality of remote computers. Further, like the remote computer 152, remote computer 156 is operably connected to the data network 154 by a connecting device 162 which could include telephone wires, optical fibers, cellular communications, etc.

Turning now to FIGURE 36, a schematic depicting an example system architecture of one embodiment of the present invention is shown. The system 10 may be portable, robust, flexible, scalable and secure to handle. In this embodiment, the system 10 builds on an open multi-tiered architecture, using Java® technologies such as servlets, applets and Enterprise JavaBeans®.

The multi-tiered architecture lends itself naturally to the portability and scalability requirements and is developed and deployed using a middle-tiered application server from IBM® (IBM Websphere). In one embodiment, tier 1 (Presentation tier) displays data and performs user

interactions using a web browser 164 operably associated with the data network 154 utilizing JavaScript and Java applets; tier 2 (Presentation Services tier) prepares data for specific presentation formats using an HTTP Servlet server engine 166 operably associated with the data network 154 and a plurality of Java servlets 168 to create HTML pages for the browsers 164. The servlets 168 use business objects 170 to obtain the data to be displayed. Tier 3 (Business Logic tier) processes the business-logic and requests storage and retrieval of data. The business objects 170 are a collection of objects that represent the business intelligence of the system 10 (e.g., auction, category, purchaser, vendor, parameter, bid, etc). The business object layer is specifically scalable as these objects can be distributed across physically separate machines running on their own CPU and memory space, thus enhancing performance. Tier 4 (Data Services tier) performs physical storage and retrieval of data in a master database file using the database server 160.

The business object layer further creates discreet database objects. These discrete database objects can be used with external systems to enhance sourcing performance. For example, the discreet database objects can be exported to an external purchaser contracting system for generating contracts and purchase orders. Although the illustrated architecture is one possible architecture, others can be used without departing from the scope of the invention.

In operation, CAMS 150 accepts data reflecting multiple parameters associated with a product or group of products. CAMS 150 may be used to collect data desirable for an on-line auction. It may then enable the auction as of a specific time and optionally provide notification that the

5 auction has begun. Vendors may bid on a product or group of products using some or all of the above referenced features. Bidding may include multiple parameters associated with a product or category of products. The auction status may or
10 may not be viewable in real time by vendors and/or purchasers. CAMS 150 may be used to manually or automatically send messages to vendors during the auction to increase competitive bidding during the auction. A purchaser may also change the formula used to weight certain
15 parameters to calculate a total cost while an auction is ongoing to test various scenarios. Reports may be generated during or at the conclusion of an auction. For purposes of this application, multiple parameters are considered to be associated with a product even where such multiple
20 parameters are associated with a category or subcategory of products.

Although the present invention has been described in detail, it should be understood that various changes, substitutions, and alterations can be made hereto without
25 departing from the spirit and scope of the invention as defined by the appended claims.

To aid the Patent Office, and any readers of any patent issued on this application in interpreting the claims appended hereto, applicants wish to note that they do not
30 intend any of the appended claims to invoke paragraph six of 35 U.S.C. § 112 as it exists on the date of filing hereof unless "means for" or "step for" are used in the particular claim.

WHAT IS CLAIMED IS:

1. An electronic bidding system, comprising:

means for enabling each of a plurality of vendors to submit bids on at least two parameters associated with a product;

means for calculating the total cost of the product to a purchaser for each vendor in response to the vendors bids, the total cost taking into account the at least two parameters associated with the product; and

means for outputting each of the vendors bids and the total cost of the product to the purchaser.

2. The bidding system of Claim 1, wherein the bids include a plurality of parameters for the product and the total cost calculating means determines the total cost of the product to the purchaser using a pre-determined total cost formula.

3. The bidding system of Claim 2, wherein the total cost formula includes at least one pre-defined constant.

4. The bidding system of Claim 1, further comprising:
means for communicating a vendor bid having the best total cost for the product to the vendors without revealing the identification of the vendor with the best total cost to encourage competitive bidding by the other vendors.

5. The bidding system of Claim 1, further comprising:
means for enabling the purchaser to make at least one
adjustment corresponding to at least one of the vendor bids
which is used by the calculating means to determine the
5 total cost of the product to the purchaser.

6. The bidding system of Claim 1, further comprising:
means for enabling communication with the vendors
during the bidding.

10

7. The bidding system of Claim 6, wherein said
communication means enables messages to be sent to the
vendors to encourage further bidding by the vendors.

15 8. The bidding system of Claim 7, wherein said
communication means enables messages to be sent to the
vendors regarding the status of the bidding, ending time for
the bidding and extensions of the bidding.

20 9. The bidding system of Claim 1, further comprising:
means for calculating the amount of savings for the
purchaser and means for communicating the savings to the
purchaser.

25 10. The bidding system of Claim 1, further comprising:
means for setting up the bidding on the product.

11. An electronic auction system, comprising:

a computer readable storage medium;

software stored on the computer readable storage medium

and operable to receive bids from a plurality of vendors,

5 each bid comprising a plurality of parameters associated

with at least one product; calculate the total cost of the

at least one product to a purchaser for each vendor in

response to the vendors' bids, the total cost taking into

account the plurality of parameters associated with the at

10 least one product, and output each of the vendors bids and

the total cost of the product to the purchaser.

12. The electronic auction system of Claim 11, wherein

the at least two parameters are selected from the group

15 consisting of price, discount, delivery, installation,

training, maintenance, the risks covered by warranty, and

length of warranty.

13. The electronic auction system of Claim 11, wherein

20 the software is further operable to send data, comprising a

vendor bid having the best total cost for the product, to

the vendors during the auction without revealing the

identification of the vendor with the best total cost.

25 14. The electronic auction system of Claim 11, wherein

the software is further operable to send data to the vendors

during the bidding to stimulate competitive bidding.

15. The electronic auction system of Claim 11, wherein the software is further operable to enable the purchaser to make at least one adjustment corresponding to at least one vendor bid which is used by the central auction management
5 system to calculate the total cost of the product to the purchaser.

16. The electronic auction system of Claim 11, wherein the total cost calculated for each vendor uses a single
10 formula for all vendors.

17. The electronic auction system of Claim 11, wherein the total cost calculated for each vendor uses a plurality of formulas, each vendor having one of the plurality of
15 formulas associated with it.

18. The electronic auction system of Claim 11, wherein the plurality of parameters is further associated with a plurality of products.
20

19. The electronic auction system of Claim 11, wherein the auction results take into account vendors bids on a market basket of products.

20. The electronic auction system of Claim 11, wherein bids from vendors are received through the Internet.
25

21. The electronic auction system of Claim 11, wherein the software is further operable to provide a vendor with
30 data about the status of an auction while the auction is in progress.

22. The electronic auction system of Claim 11, wherein the software is further operable to provide a purchaser with data about the status of an auction while the auction is in progress.

5

23. The electronic auction system of Claim 11, wherein the software is further operable to control which vendors are allowed to participate in an auction.

10

24. The electronic auction system of Claim 11, wherein the software is further operable to allow a total cost formula to be defined for each product in an auction.

15

25. A method of conducting an on-line auction, comprising:

20

receiving bids from a plurality of vendors, each bid comprising a plurality of parameters associated with at least one product, calculating, using a computer, the total cost of the at least one product to a purchaser for each vendor in response to the vendors' bids, the total cost taking into account the plurality of parameters associated with the at least one product, and outputting, using the computer, each of the vendors bids and the total cost of the product to the purchaser.

25

26. The method of Claim 25, further comprising:

defining a plurality of parameters for a category of products; and

defining a total cost formula for the category of products in response to the plurality of parameters.

30

27. The method of Claim 26, wherein the total cost formula includes at least one constant associated with at least one parameter.

5 28. The method of Claim 25, wherein the plurality of parameters includes price and non-price parameters.

29. The method of Claim 28, wherein the price parameters include at least one of a base price, volume
10 discounts, rebates, life cycle discounts, utilization charges, maintenance charges and administration charges.

30. The method of Claim 28, wherein the non-price parameters include at least one of delivery timing, national
15 service coverage, minimum quality levels, employee skill levels, a dedicated account management team, special reporting requirements, online ordering, warranty and length of contract.

20 31. The method of Claim 26, wherein defining a plurality of parameters comprises defining at least two sub-categories for the category of products, and defining at least two parameters for each subcategory.

25 32. The method of Claim 25, further comprising:
communicating the best vendor's bid to the other vendors to encourage competitive bidding.

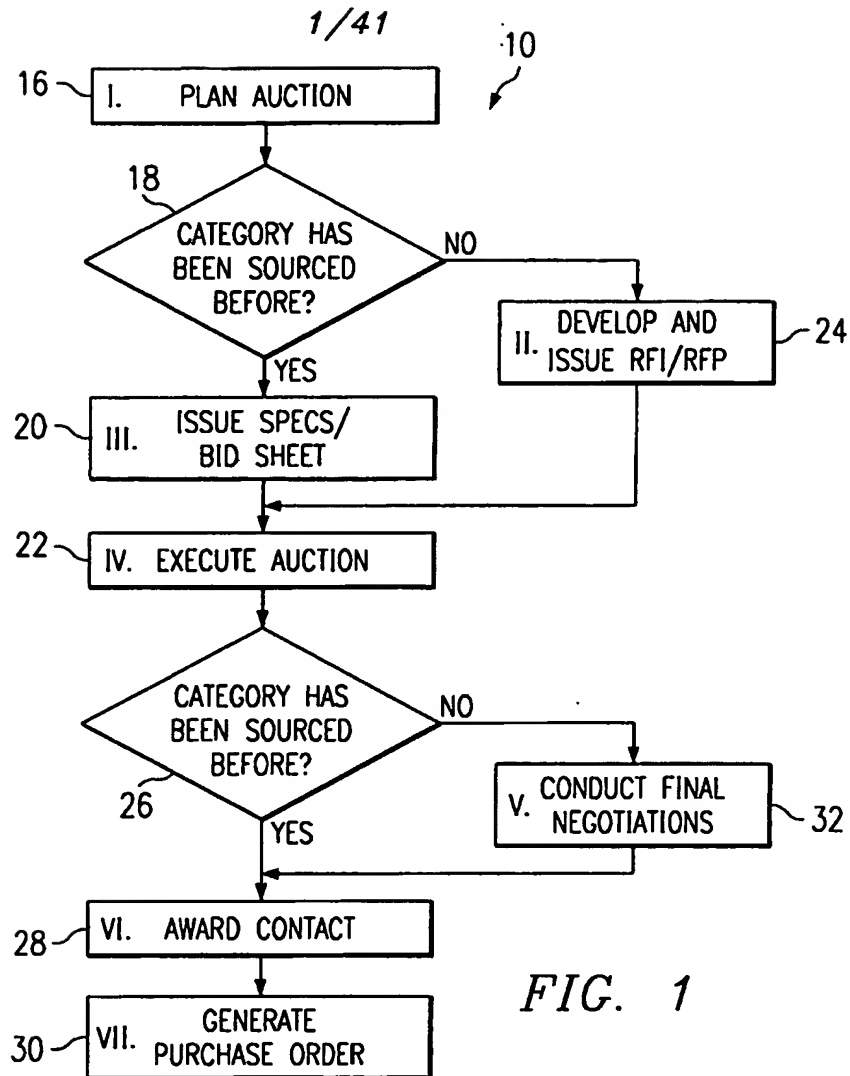


FIG. 1

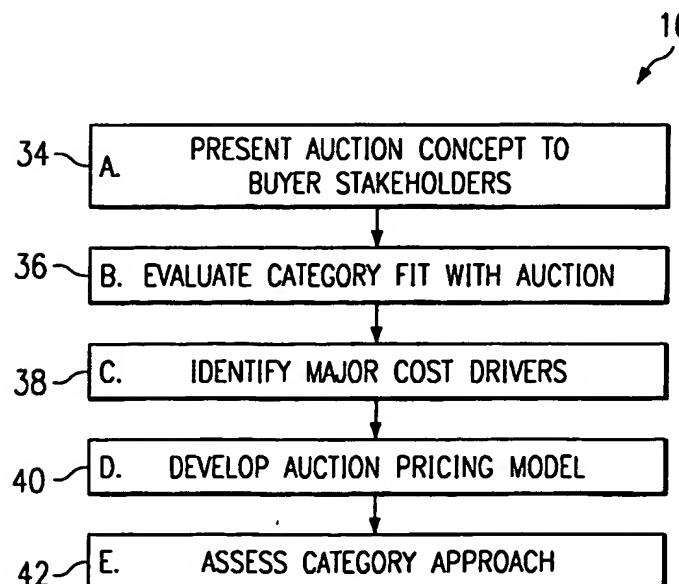


FIG. 2

2/41

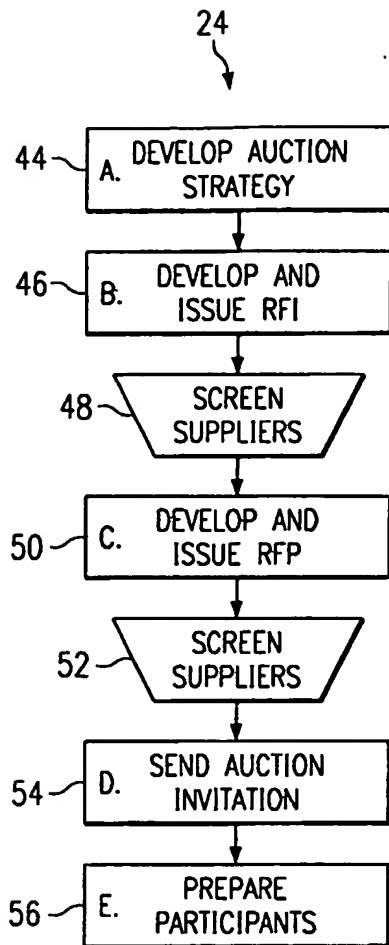


FIG. 3

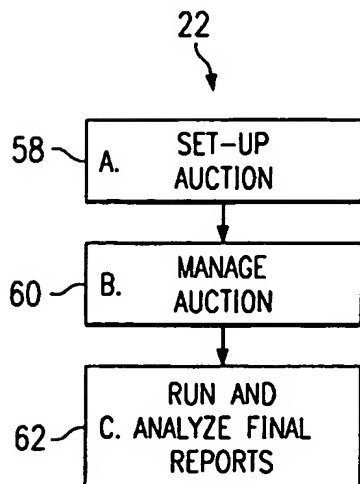


FIG. 4

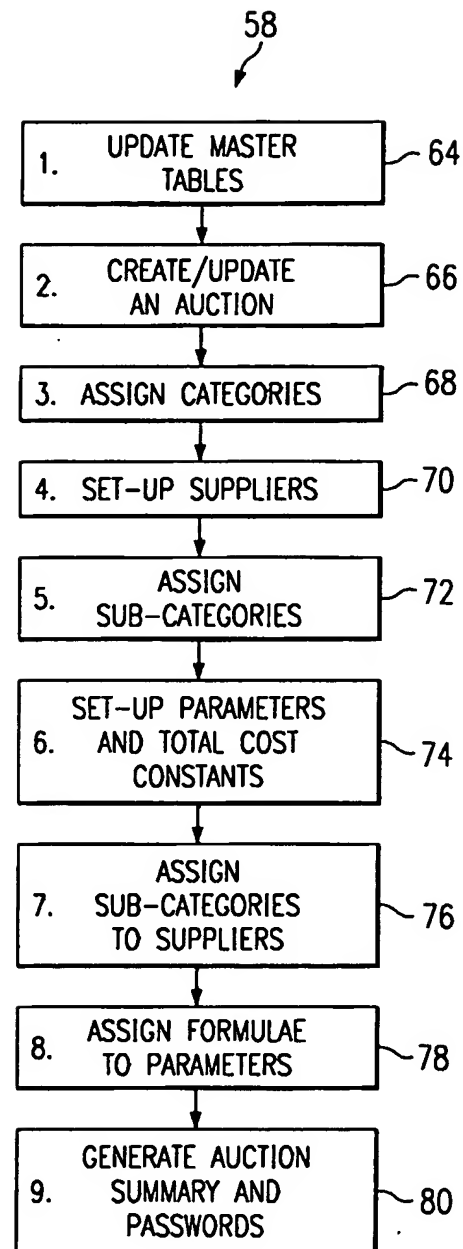
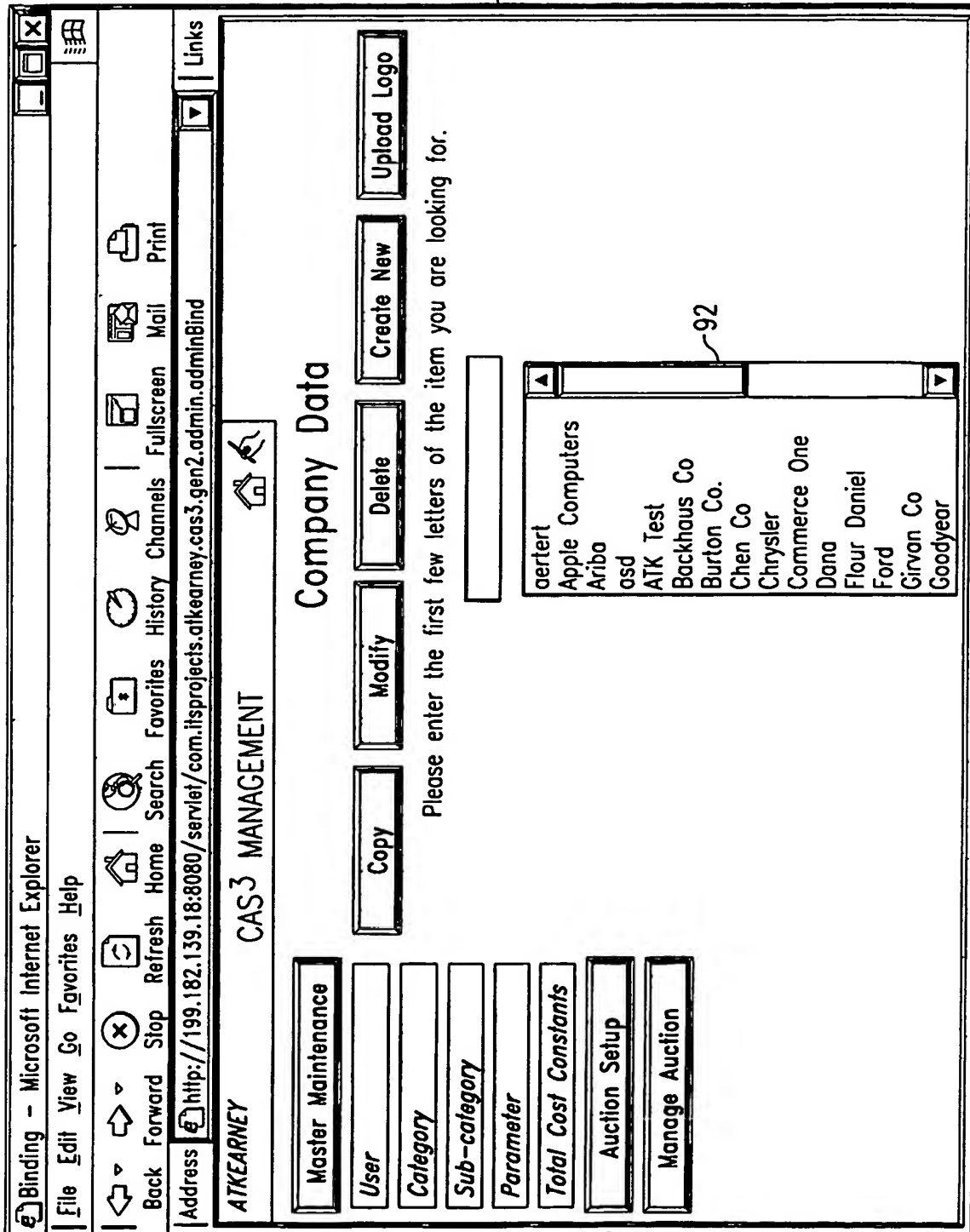


FIG. 5

3/41

FIG. 6



90

92

4/41

Microsoft Internet Explorer
File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.itsprojects.alkearney.cas3.gen2.admin.adminBind> Links

ATKEARNEY CAS3 MANAGEMENT

Master Maintenance User Category Sub-category Parameter Total Cost Constants Auction Setup Manage Auction

Company Name* Login Name*
Contact Name* Email*
Is Admin No
Admin Password Confirm Password
Street Address 1* City*
Street Address 2 State
Zip* Country*
Phone* Fax*
Contact Cell Number Duns Number
Time Zone GMT
User Defined 1 Language*
User Defined 3 User Defined 2
Minority Owned Women Owned No
Create New

*indicates mandatory fields

FIG. 7

5/41

Binding - Microsoft Internet Explorer

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.admin.adminBind> Links

ATKEARNEY CAS3 MANAGEMENT

Master Maintenance
User
Category
Sub-category
Parameter
Total Cost Constants
Auction Setup
Manage Auction

Category Master

Name*

Description

Create New

*indicates mandatory fields

96

FIG. 8

6/41

Binding - Microsoft Internet Explorer

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.admin.adminBind> Links

ATKEARNEY CAS3 MANAGEMENT

Master Maintenance

User

Category

Sub-category

Parameter

Total Cost Constants

Auction Setup

Manage Auction

Subcategory Master

Name*

Description

Select Categories

- 160/40 RV
- 200/20
- I-Purchasing Content
- I-Purchasing License Fees
- I-Purchasing SI

Selected Categories

>> <<

Create New

*indicates mandatory fields

FIG. 9

98

7/41

100

Binding - Microsoft Internet Explorer

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.admin.adminBind> Links

ATKEARNEY CAS3 MANAGEMENT

Master Maintenance

User

Category

Sub-category

Parameter

Total Cost Constants

Auction Setup

Manage Auction

Parameter Master

Name*

Unit

Create New

*indicates mandatory fields

FIG. 10

8/41

102

FIG. 11

Binding - Microsoft Internet Explorer
File Edit View Go Favorites Help
Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print
Address <http://199.182.139.18:8080/servlet/com.itsprojects.alkearney.cas3.gen2.admin.adminBind> Links

ATKEARNEY CAS3 MANAGEMENT

Constants Master (for Total Cost)

Name*
Unit

Select Parameters

Select Parameters

Selected Parameters

1-Purch Lic Annual
Interest Rate
Price
SI fixed bid
Test Parameter

Create New

*indicates mandatory fields

Master Maintenance
User
Category
Sub-category
Parameter
Total Cost Constants
Auction Setup
Manage Auction

9/41

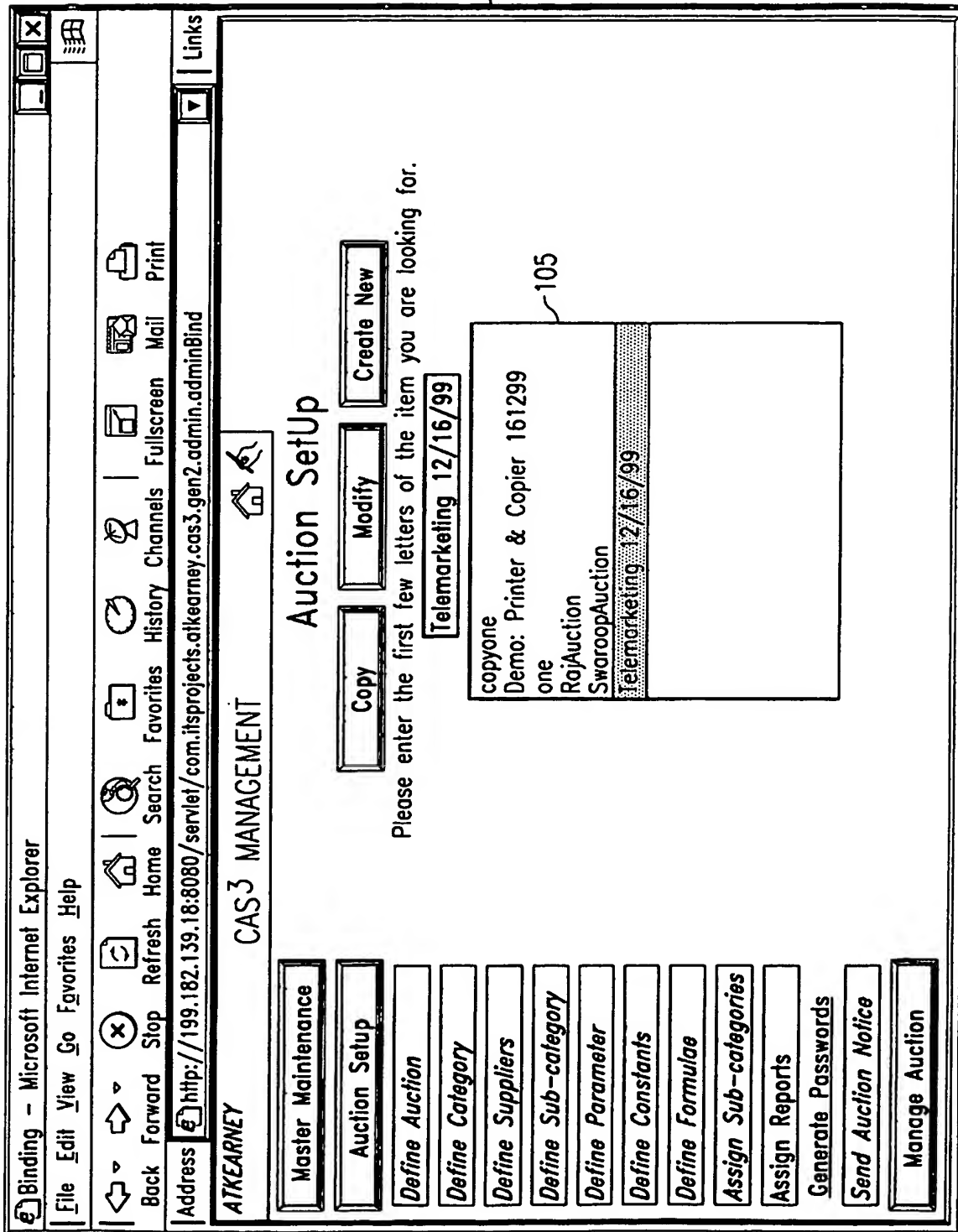


FIG. 12A

10/41

Binding - Microsoft Internet Explorer
File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.admin.adminBind> Links

ATKEARNEY CAS3 MANAGEMENT

Master Maintenance Auction Name

Auction Setup Auction Description

Define Auction Buyer or Create new buyer

Define Category RFP# Toll Free Number

Define Suppliers Auctioneer email Re-enter Auctioneer email

Define Sub-category Currency Auction URL

Define Parameter Time Zone (GMT) Greenwich Mean Time

Define Constants Start Date/Time 12/16/1999 09:00

Define Formulae End Date/Time 12/16/1999 17:00

Assign Sub-categories Auction Strategy configuration:

Assign Reports Definition of new bid (in minutes) 10

Generate Passwords Duration of Extension (in minutes) 5

Send Auction Notice Maximum number of extensions 12

Maximum % difference from previous bid 25.0

Minimum % difference from previous bid 1.0

Manage Auction Supplier idle time (for messages) in minutes 30

106

FIG. 12B

11/41

FIG. 12C

Binding - Microsoft Internet Explorer
File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.admin.adminBind> Links

ATKEARNEY CAS3 MANAGEMENT

Master Maintenance Auctioneer email Re-enter Auctioneer email
Auction Setup Currency Auction URL
Define Auction Auction Strategy configuration: http://
Define Category Time Zone (GMT) Greenwich Mean Time
Define Suppliers Start Date/Time 12/16/1999 09:00
Define Sub-category End Date/Time 12/16/1999 17:00
Define Parameter Definition of new bid (in minutes) 10
Define Constants Duration of Extension (in minutes) 5
Assign Sub-categories Maximum number of extensions 12
Assign Reports Maximum % difference from previous bid 25.0
Generate Passwords Minimum % difference from previous bid 1.0
Send Auction Notice Supplier idle time (for messages) in minutes 30
Price % difference from best to trigger message 1.0
Percent better than best bid to suggest 1.0
Create New

Next

106

12/41

108

FIG. 13

Binding - Microsoft Internet Explorer

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address http://199.182.139.18:8080/servlet/com.itprojects.atkearney.cas3.gen2.admin.adminBind

Links

ATKEARNEY CAS3 MANAGEMENT

Define Category

Master Maintenance

Auction Setup

Define Auction

Define Category

Define Suppliers

Define Sub-category

Define Parameter

Define Constants

Define Formulae

Assign Sub-categories

Assign Reports

Generate Passwords

Send Auction Notice

Manage Auction

Previous

Next

Auction Name: Telemarketing 12/16/99

Create new categories

List of Categories

160/40 RV

200/20

Copiers

I-Purchasing Content

I-Purchasing License Fees

I-Purchasing SI

Add>>

<<Remove

Save

Selected Categories

Telemarketing

Previous

Next

13/41

110

FIG. 14

Binding - Microsoft Internet Explorer
 File Edit View Go Favorites Help
 Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print
 Address http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.admin.adminBind Links

ATKEARNEY CAS3 MANAGEMENT

Define Supplier

Master Maintenance
 Auction Setup
 Define Auction
 Define Category
 Define Suppliers
 Define Sub-category
 Define Parameter
 Define Constants
 Define Formulae
 Assign Sub-categories
 Assign Reports
 Generate Passwords
 Send Auction Notice
 Manage Auction

Auction Name:

Create new Suppliers

List of Suppliers

aertert
Apple Computers
Ariba
asd
ATK Test
Backhaus Co

Selected Suppliers

Girvan Co
King Co

Add>> <<Remove

Save

Previous < Next >

14/41

112

FIG. 15

Binding - Microsoft Internet Explorer

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.admin.adminBind>

Links

ATKEARNEY

CAS3 MANAGEMENT

Define Sub-Category

Master Maintenance

Auction Setup

Define Auction

Define Category

Define Suppliers

Define Sub-category

Define Parameter

Define Constants

Define Formulae

Assign Sub-categories

Assign Reports

Generate Passwords

Send Auction Notice

Manage Auction

Previous ◀

Next ▶

Auction Name:

Category:

Create new Sub-category

Select	Sub-Categories	Quantity
<input checked="" type="checkbox"/>	Inbound sales	150000
<input checked="" type="checkbox"/>	Outbound sales	200000

Save

Previous ◀

Next ▶

15/41

FIG. 16A

Binding - Microsoft Internet Explorer
File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.admin.adminBind> Links

ATKEARNEY CAS3 MANAGEMENT

Master Maintenance Auction Setup Define Auction Define Category Define Suppliers Define Sub-category Define Parameter Define Constants Define Formulae Assign Sub-categories Assign Reports Generate Passwords Send Auction Notice Manage Auction

Define Parameter

Auction Name: Previous Next

Category: Sub Category:

Select the parameters to be used for the auction or Add new parameters

Select	Parameter	Unit Label	Baseline	Increasing Bids?
<input type="checkbox"/>	Price	\$/Hr	23.5	<input type="checkbox"/>
<input type="checkbox"/>	I-Purch Lic Annual			<input type="checkbox"/>
<input type="checkbox"/>	Interest Rate			<input type="checkbox"/>
<input type="checkbox"/>	SI fixed bid			<input type="checkbox"/>
<input type="checkbox"/>	Test Parameter			<input type="checkbox"/>
<input type="checkbox"/>	Toner Cost			<input type="checkbox"/>
<input type="checkbox"/>	Toner Cost Per Page			<input type="checkbox"/>
<input type="checkbox"/>	Toner cost/pg			<input type="checkbox"/>
<input checked="" type="checkbox"/>	Training	\$/Hr	14.5	<input type="checkbox"/>
<input type="checkbox"/>	Transportation Cost			<input type="checkbox"/>

16/41

FIG. 16B

Binding - Microsoft Internet Explorer
 File Edit View Go Favorites Help
 Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print
 Address <http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.admin.adminBind> Links

ATKEARNEY CAS3 MANAGEMENT

Master Maintenance
 Auction Setup
 Define Auction
 Define Category
 Define Suppliers
 Define Sub-category
 Define Parameter
 Define Constants
 Define Formulae
 Assign Sub-categories
 Assign Reports
 Generate Passwords
 Send Auction Notice
 Manage Auction

<input type="checkbox"/>	Treadlife				<input type="checkbox"/>
<input type="checkbox"/>	Interest Rate				<input type="checkbox"/>
<input type="checkbox"/>	Mant. Cost Per Page				<input type="checkbox"/>
<input type="checkbox"/>	Operating Cost Per Page				<input type="checkbox"/>
<input type="checkbox"/>	SI fixed bid				<input type="checkbox"/>
<input type="checkbox"/>	Sorter				<input type="checkbox"/>
<input type="checkbox"/>	Test Parameter				<input type="checkbox"/>
<input type="checkbox"/>	Toner Cost				<input type="checkbox"/>
<input type="checkbox"/>	Toner Cost Per Page				<input type="checkbox"/>
<input type="checkbox"/>	Toner cost/pg				<input type="checkbox"/>
<input checked="" type="checkbox"/>	Training		\$/Hr	14.5	<input type="checkbox"/>
<input type="checkbox"/>	Transportation Cost				<input type="checkbox"/>
<input type="checkbox"/>	Treadlife				<input type="checkbox"/>
<input checked="" type="checkbox"/>	Vol. Disc. @ \$10M		%	.0	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Vol. Disc. @ \$5M		%	.0	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Warranty Cost				<input type="checkbox"/>

Save Previous Next

17/41

116

FIG. 17

Binding - Microsoft Internet Explorer
 File Edit View Go Favorites Help
 Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print
 Address <http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.admin.adminBind> Links

ATKEARNEY CAS3 MANAGEMENT

Define Constants Previous ◀ Next ▶

Master Maintenance
 Auction Setup Auction Name: Category:
 Define Auction
 Define Category Sub Category:
 Define Suppliers Parameters:
 Define Sub-category
 Define Parameter
 Define Constants
 Define Formulae
 Assign Sub-categories
 Assign Reports
 Generate Passwords
 Send Auction Notice
 Manage Auction

Select the constants to be used in the formulas of the parameters or Add new constants

Select	Constants for Total Cost	Value
<input type="checkbox"/>	Total hours-inbound	
<input checked="" type="checkbox"/>	Total hours-outbound	200000.0
<input checked="" type="checkbox"/>	Training hours-outbound	5000.0
<input type="checkbox"/>	Training hours-inbound	

Save Previous ◀ Next ▶

18/41

FIG. 18

Binding - Microsoft Internet Explorer
File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.admin.adminBind> Links

ATKEARNEY CAS3 MANAGEMENT

Assign Sub-categories Previous Next

Auction Name: **Telemarketing 12/16/99**

Category: **Telemarketing** Supplier: **King Co**

Select	Sub-categories	Incumbent	Parameters	RFP Bid
<input checked="" type="checkbox"/>	Inbound sales	<input type="checkbox"/>	Price	22.5
			Training	15.0
			Vol. Disc. @ \$5M	.05
			Vol. Disc. @ \$10M	.1
			Switching Cost	5000.0
<input checked="" type="checkbox"/>	Outbound sales	<input type="checkbox"/>	Price	22.5
			Training	15.0
			Vol. Disc. @ \$5M	.05
			Vol. Disc. @ \$10M	.1
			Switching Cost	5000.0

Save Previous Next

Master Maintenance
Auction Setup
Define Auction
Define Category
Define Suppliers
Define Sub-category
Define Parameter
Define Constants
Define Formulae
Assign Sub-categories
Assign Reports
Generate Passwords
Send Auction Notice
Manage Auction

19/41

120

FIG. 19A

Binding - Microsoft Internet Explorer
 File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.admin.adminBind> Links

ATKEARNEY CAS3 MANAGEMENT

Define Formulae

Auction Name: Previous Next

Category:

Sub Category:

Parameters:

Parameters Operators Constants For Total Cost

Verify formula here:

Save Clear Copy Formula Paste Formula Backspace Previous Next

Parameter	Formula
Price	
Training	Training*Training hours-outbound/Total hours-outbound
Vol. Disc. @ \$10M	(-Vol. Disc. @ \$10M*Price)

Master Maintenance
 Auction Setup
 Define Auction
 Define Category
 Define Suppliers
 Define Sub-category
 Define Parameter
 Define Constants
 Define Formulae
 Assign Sub-categories
 Assign Reports
 Generate Passwords
 Send Auction Notice
 Manage Auction

20/41

Binding - Microsoft Internet Explorer
File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.admin.adminBind> Links

ATKEARNEY CAS3 MANAGEMENT

Define Formulae

Auction Name: **Telemarketing 3-12/16/99**

Category: **Telemarketing**

Sub Category: **Outbound Sales**

Parameters: **Price**

Parameters Operators Constants For Total Cost

None Selected

Verify formula here:

Parameter	Formula
Price	
Training	Training*Training hours-outbound/Total hours-outbound
Vol. Disc. @ \$10M	(-Vol.Disc. @ \$10M*Price)
Vol. Disc. @ \$5M	(-Vol.Disc. @ \$5M*Price)

FIG. 19B

21/41

120

FIG. 20A

Binding - Microsoft Internet Explorer
File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.admin.adminBind> Links

ATKEARNEY CAS3 MANAGEMENT

Define Formulae Previous Next

Auction Name: Copiers & Printers-test
Category: Printers
Sub Category: Laser Printers
Parameters: Toner Cost Per Page

Parameters Operators Constants For Total Cost
None Selected None Selected

Verify formula here:
Toner Cost Per Page * Number of Pgs/Yr/Printer

Save Clear Copy Formula Paste Formula Backspace Previous Next

Parameter	Formula
Transportation Cost	
Warranty Cost	
Price	
Toner Cost Per Page	Toner Cost Per Page * Number of Pgs/Yr/Printer

Master Maintenance
Auction Setup
Define Auction
Define Category
Define Suppliers
Define Sub-category
Define Parameter
Define Constants
Define Formulae
Assign Sub-categories
Assign Reports
Generate Passwords
Send Auction Notice
Manage Auction

22/41

-120

FIG. 20B

Binding - Microsoft Internet Explorer
File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.admin.adminBind> Links

ATKEARNEY CAS3 MANAGEMENT

Define Formulae Previous Next

Auction Name: Tires 12/16/99

Category: Tires 1

Sub Category: Tire X

Parameters: Treadlife

Parameters Operators Constants For Total Cost
None Selected None Selected

Verify formula here: Total Miles / Treadlife * Price

Save Clear Copy Formula Paste Formula Backspace Previous Next

Parameter	Formula
Price	
Treadlife	Total Miles / Treadlife * Price

Master Maintenance
Auction Setup
Define Auction
Define Category
Define Suppliers
Define Sub-category
Define Parameter
Define Constants
Define Formulae
Assign Sub-categories
Assign Reports
Generate Passwords
Send Auction Notice
Manage Auction

23/41

120

FIG. 20C

Binding - Microsoft Internet Explorer
 File Edit View Go Favorites Help
 Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print
 Address <http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.admin.adminBind> Links

ATKEARNEY CAS3 MANAGEMENT

Define Formulae

Auction Name: Previous Next

Category:

Sub Category:

Parameters:

Parameters Operators Constants For Total Cost

Verify formula here:

Save Clear Copy Formula Paste Formula Backspace

Parameter	Formula
Price	
Training	Training*Training hours-inbound/Total hours-inbound
Vol. Disc. @ \$10M	(-Vol. Disc. @ \$10M*Price)
Vol. Disc. @ \$5M	(-Vol. Disc. @ \$5M*Price)

Master Maintenance
 Auction Setup
 Define Auction
 Define Category
 Define Suppliers
 Define Sub-category
 Define Parameter
 Define Constants
 Define Formulae
 Assign Sub-categories
 Assign Reports
 Generate Passwords
 Send Auction Notice
 Manage Auction

24/41

-120

FIG. 21A

Binding - Microsoft Internet Explorer

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.admin.adminBind> Links

ATKEARNEY CAS3 MANAGEMENT

Assign Reports

Auction Name: Copiers & Printers-test

REPORTS:

Module	Buyer		Supplier		All
	Normal	View Only	Normal	View Only	
Bids And Quartiles Crosstab	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bids Percentage Change Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Best Bids Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bid History Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rank Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bid Counts Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bid Activity Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bids Over Time Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall Movement Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

GRAPHS:

Module	Buyer		Supplier		All
	Normal	View Only	Normal	View Only	
Best Savings Pie Chart	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Baseline High Low	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Savings by Supplier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Percentage Savings for Subcategory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Master Maintenance

Auction Setup

Define Auction

Define Category

Define Suppliers

Define Sub-category

Define Parameter

Define Constants

Define Formulae

Assign Sub-categories

Assign Reports

Generate Passwords

Send Auction Notice

Manage Auction

Previous Next

25/41

-120

FIG. 21B

Binding - Microsoft Internet Explorer

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.itsprojects.alkearney.cas3.gen2.admin.adminBind> Links

ATKEARNEY CAS3 MANAGEMENT

Master Maintenance

Auction Setup

Define Auction

Define Category

Define Suppliers

Define Sub-category

Define Parameter

Define Constants

Define Formulae

Assign Sub-categories

Assign Reports

Generate Passwords

Send Auction Notice

Manage Auction

Save

Previous Next

Module	Buyer		Supplier		All
	Normal	View Only	Normal	View Only	
Best Savings Pie Chart	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Baseline High Low	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Savings by Supplier	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Percentage Savings for Subcategory	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Best Bid Chart	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bid History Plot	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rank Chart	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Current Bid Chart	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
High Low Chart	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

GRAPHS:

Select All

Bids Percentage Change Report ☒

Best Bids Report ☒

Bid History Report ☒

Rank Report ☒

Bid Counts Report ☒

Bid Activity Report ☒

Bids Over Time Report ☒

Overall Movement Report ☒

26/41

122

FIG. 22A

Microsoft Internet Explorer
File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.itprojects.atkearney.cas3.gen2.admin.adminBind> Links

ATKEARNEY CAS3 MANAGEMENT

Send Auction Notice

Auction Names: Copiers & Printers-test

Auction Name: Copiers & Printers-test

Description: Copy of Demo 12/16/99, with different total cost-cf

RFP No: 12345

Start Time: 12-16-1999 11:00 PM GMT

You will log on to Auction at <http://199.182.139.18:8080/servlet/com.itprojects.atkearney.cas3.gen2.Login>

Auction For Printer Co
800 No 800-123-4567
End Time 12-18-1999 11:00 PM GMT

Send Auction Notice

Sub Category: B&W 100 Pgs Per Minute

Supplier	Price(Down) [\$ per unit]	Sorter(Down) 150.00 [\$per unit]	Operating Cost Per Page(Down) 0.05[\$ per page]	Maint. Cost Per Page(Down) 0.05[\$ per page]
Canon(incumbent)	9,300.00	150.00	0.05	0.045
Ricoh	9,400.00	200.00	0.045	0.05

Color

Supplier	Price(Down) 15,000.00 [\$ per unit]	Operating Cost Per Page(Down) 0.18[\$ per page]	Maint. Cost Per Page(Down) 0.07[\$ per page]
Canon(incumbent)	14,500.00	0.015	0.07
Ricoh	16,000.00	0.25	0.07

Master Maintenance

Auction Setup

Define Auction

Define Category

Define Suppliers

Define Sub-category

Define Parameter

Define Constants

Define Formulae

Assign Sub-categories

Assign Reports

Generate Passwords

Send Auction Notice

Manage Auction

Previous

27/41

122

FIG. 22B

Binding - Microsoft Internet Explorer
File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.admin.adminBind> Links

ATKEARNEY CAS³ MANAGEMENT

Master Maintenance

Auction Names: **Telemarketing 3-12/16/99**

Auction Name: **Telemarketing 3-12/16/99**

Description: **Telemarketing services**

RFP No: **800 No 123**

Start Time: **12-17-1999 01:20 AM GMT**

You will log on to Auction at <http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.Login>

Auction Setup

Define Auction

Define Category

Define Suppliers

Define Sub-category

Define Parameter

Define Constants

Define Formulae

Assign Sub-categories

Assign Reports

Generate Passwords

Send Auction Notice

Manage Auction

Category

Sub Category

Telemarketing

Inbound sales

Supplier	Price(Down)	Training(Down)	Vol. Disc. @	Vol. Disc. @
Girvan Co (incumbent)	23.50[\$/Hr]	14.50[\$/Hr]	\$5M(Up) 0.00[%]	\$10M(Up) 0.00[%]
King Co	23.50	14.50	0.00	0.00
King Co	22.50	15.00	0.05	0.10

Sub Category

Outbound sales

Supplier	Price(Down)	Training(Down)	Vol. Disc. @	Vol. Disc. @
Girvan Co (incumbent)	23.50[\$/Hr]	14.50[\$/Hr]	\$5M(Up) 0.00[%]	\$10M(Up) 0.00[%]
King Co	23.50	14.50	0.00	0.00
King Co	22.50	15.00	0.05	0.10

Send Auction Notice

Send Auction Notice

Previous

28/41

124

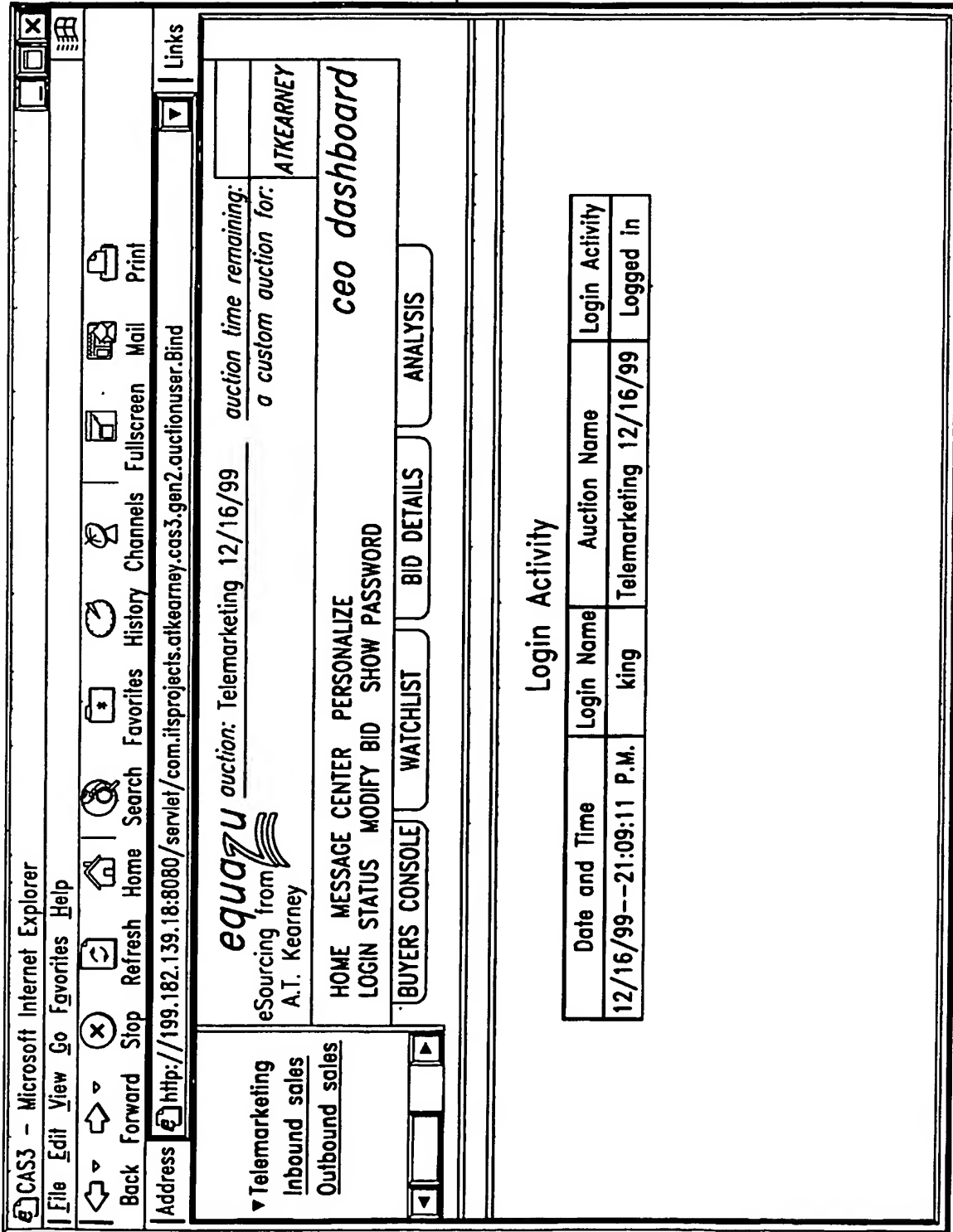


FIG. 23

<p>CAS3 - Microsoft Internet Explorer</p> <p>File Edit View Go Favorites Help</p> <p>Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print</p> <p>Address http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.auctionuser.Bind Links</p>		<p>equavz auction: Telemarketing 3-12/16/99 auction time remaining: ATKEARNEY</p> <p>eSourcing from A.T. Kearney a custom auction for:</p> <p>HOME MESSAGE CENTER PERSONALIZE buyers console LOGIN STATUS MODIFY BID SHOW PASSWORD</p> <p>CEO DASHBOARD WATCHLIST BID DETAILS ANALYSIS</p>	
<p>▼ Telemarketing</p> <p>Inbound sales</p> <p>Outbound sales</p>			
<p>Category Telemarketing</p> <p>Start Time 12/16/1999 08:20 PM End Time 12/16/1999 11:00 PM</p>			
Parameters of the SubCategory: Inbound sales			
Mark to include	Parameter name	Formula	
<input checked="" type="checkbox"/>	Price		
<input checked="" type="checkbox"/>	Training	Training*Training hours-inbound/Total hours-inbound	
<input checked="" type="checkbox"/>	Vol. Disc. @ \$5M	(-Vol. Disc. @ \$5M*Price)	
<input checked="" type="checkbox"/>	Vol. Disc. @ \$10M	(-Vol. Disc. @ \$10M*Price)	
<div>Save</div>			

30/41

126

FIG. 24

CAS3 - Microsoft Internet Explorer
File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.itprojects.atkearney.cas3.gen2.auctionuser.Bind> Links

equa
eSourcing from
A.T. Kearney

HOME MESSAGE CENTER PERSONALIZE
LOGIN STATUS MODIFY BID SHOW PASSWORD

CEO DASHBOARD WATCHLIST BUYERS CONSOLE ANALYSIS

equa auction: Telemarketing 2-12/16/99 auction time remaining:
a custom auction for: **ATKEARNEY**


bid details

▼ Telemarketing
Inbound sales
Outbound sales

Category Telemarketing

Start Time 12/16/1999 04:20 PM End Time 12/16/1999 11:00 PM

Export To Excel

Sub Category	Inbound sales			Baseline Total Cost			Quantity			
Supplier	Price [\$/Hr]	Training [\$/Hr]	Vol. Disc. @ \$5M [%]	Vol. Disc. @ \$10M [%]	Total Cost [\$/Hr]	Savings [\$/Hr]	Total Volume Cost [\$/Hr]	Total Volume Savings [\$/Hr]	Switching Cost [\$/Hr]	
Girvan Co 	23.50	14.50	0.00	0.00	23.69	14.31	60.38	3,554,000.00	2,146,000.00	0.00
King Co	22.50	15.00	0.05	0.10	19.32	18.68	96.64	2,898,750.00	2,801,250.00	5,000.00

Export To Excel

31/41

128

FIG. 25A

CAS3 - Microsoft Internet Explorer

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.ilsprojects.atkearney.cas3.gen2.auctionuser.Bind> Links

equa *au*

eSourcing from *supplier: King Co*

A.T. Kearney

00003:29:26

auction time remaining:

a custom auction for:

ATKEARNEY

HOME MESSAGE CENTER PERSONALIZE *bid details*

ANALYSIS

Place Some Bid for Category Telemarketing

Category Telemarketing

Start Time 12/16/1999 04:20 PM End Time 12/16/1999 11:00 PM

Sub-category	Parameters	Best Bid	Current Bid	Enter New Bid
Inbound sales	Price [\$/Hr]	22.50	22.50	
	Training [\$/Hr]	14.50	15.00	
	Vol. Disc @ \$5M [%]	0.05	0.05	
	Vol. Disc @ \$10M [%]	0.10	0.10	

Submit Reset

Sub-category	Parameters	Best Bid	Current Bid	Enter New Bid
Outbound sales	Price [\$/Hr]	22.50	22.50	

32/41

128

CAS3 - Microsoft Internet Explorer

File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.ilsprojects.atkearney.cas3.gen2.auctionuser.Bind> Links

equa
eSourcing from
A.T. Kearney

equa auction: Telemarketing 2-12/16/99 auction time remaining: 00003:28:23
a custom auction for: ATKEARNEY

HOME MESSAGE CENTER PERSONALIZE *bid details*

ANALYSIS

Sub-category	Parameters	Best Bid	Current Bid	Enter New Bid
Outbound sales	Price [\$ /Hr]	22.50	22.50	
	Training [\$ /Hr]	14.50	15.00	
	Vol. Disc. @ \$5M [%]	0.05	0.05	
	Vol. Disc. @ \$10M [%]	0.10	0.10	

Submit Reset

FIG. 25B

33/41

130

CAS3 - Microsoft Internet Explorer
File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.auctionuser.Bind> Links

eSourcing from
A.T. Kearney

auction: Telemarketing 2-12/16/99 auction time remaining: 00006:31:11
a custom auction for: ATKEARNEY

HOME MESSAGE CENTER PERSONALIZE *ceo dashboard*

BUYERS CONSOLE WATCHLIST BID DETAILS ANALYSIS

Start Time 12/16/1999 04:20 PM End Time 12/16/1999 11:00 PM

Categories	Total Savings		Best Savings	Best Savings %
	Girvan Co	King Co		
Telemarketing	4,973,500.00	6,501,250.00	6,501,250.00	78.08
Total Savings	4,973,500.00	6,501,250.00	6,501,250.00	78.08
Adjustments		500000		
Final Savings		7001250		

FIG. 26

34/41

132

FIG. 27

CAS3 - Microsoft Internet Explorer
File Edit View Go Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print

Address <http://199.182.139.18:8080/servlet/com.itsprojects.atkearney.cas3.gen2.auctionuser.Bind> Links

equa
eSourcing from
A.T. Kearney

HOME MESSAGE CENTER PERSONALIZE

CEO DASHBOARD BUYERS CONSOLE BID DETAILS ANALYSIS


watchlist

Telemarketing
Inbound sales
Outbound sales

equa auction: Telemarketing 2-12/16/99 auction time remaining: 00006:29:33
a custom auction for: ATKEARNEY

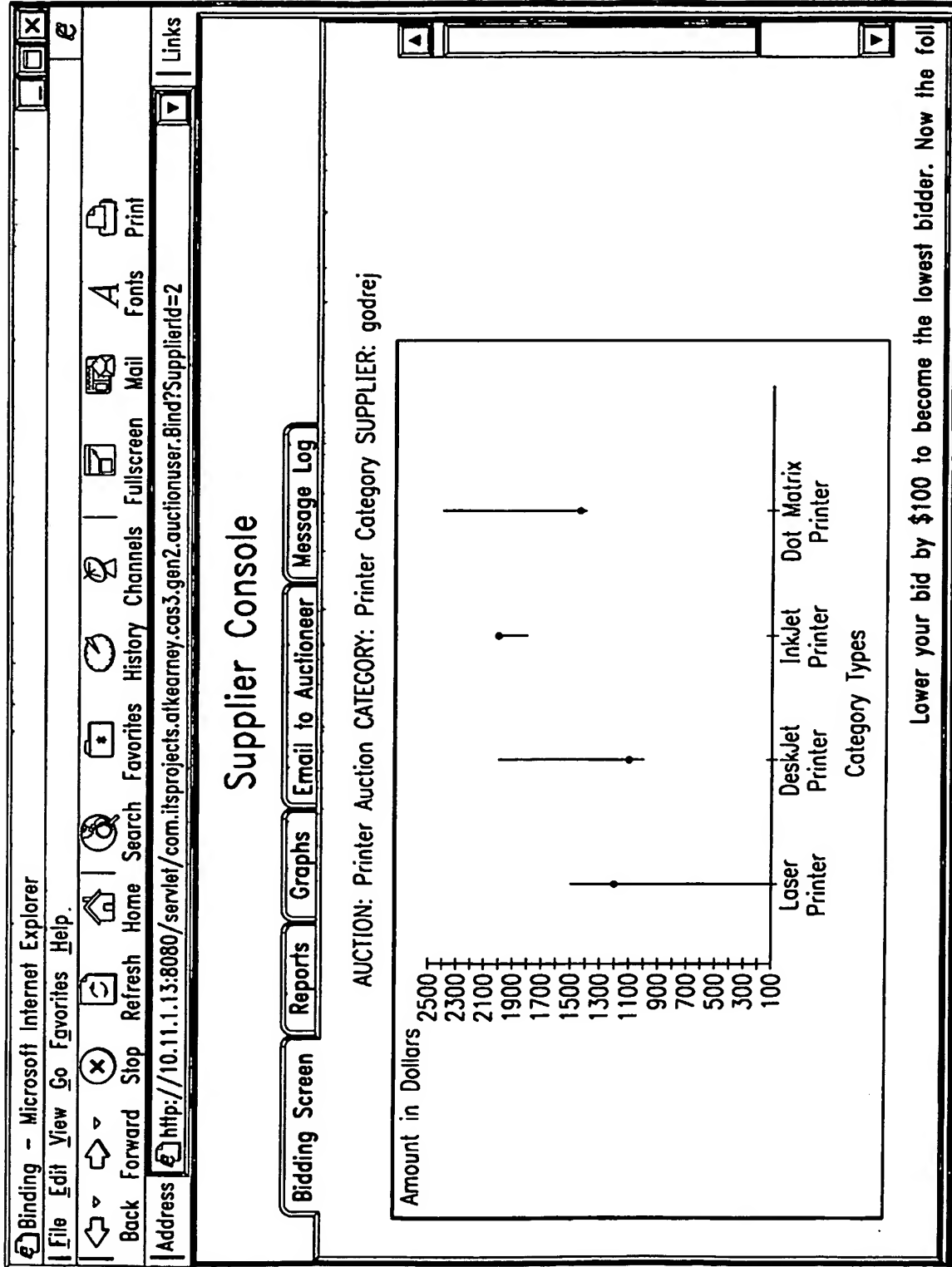
Category: Telemarketing

Start Time: 12/16/1999 04:20 PM End Time: 12/16/1999 11:00 PM

Sub Category	Inbound sales			Baseline		Total Cost	23.69	Quantity	150,000
Supplier	Price [\$/Hr]	Total Cost [\$/Hr]	Savings [\$/Hr]	Savings [%]	Total Volume Cost [\$/Hr]	Total Volume Savings [\$/Hr]	Switching Cost [\$/Hr]		
Girvan Co 	23.50	23.69	14.31	60.38	3,554,000.00	2,146,000.00	0.00		
King Co	22.50	19.32	18.68	96.64	2,898,750.00	2,801,250.00	5,000.00		

35/41

FIG. 28



36/41

FIG. 29

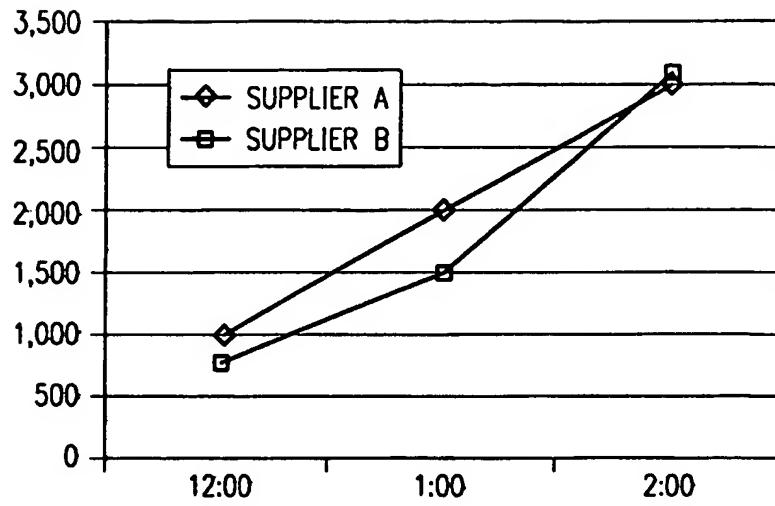


FIG. 30

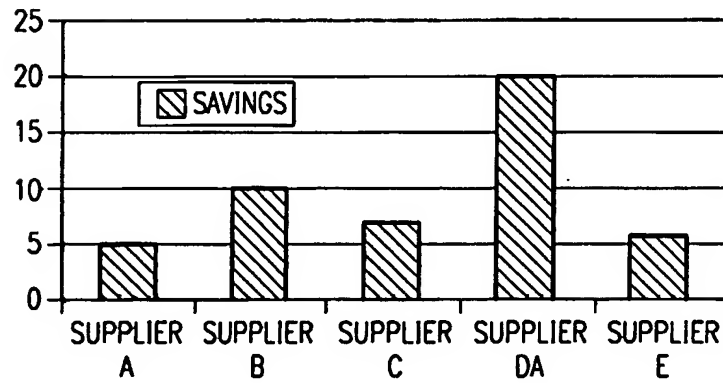


FIG. 31

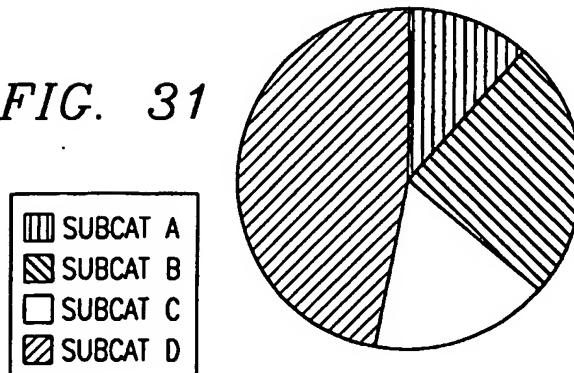
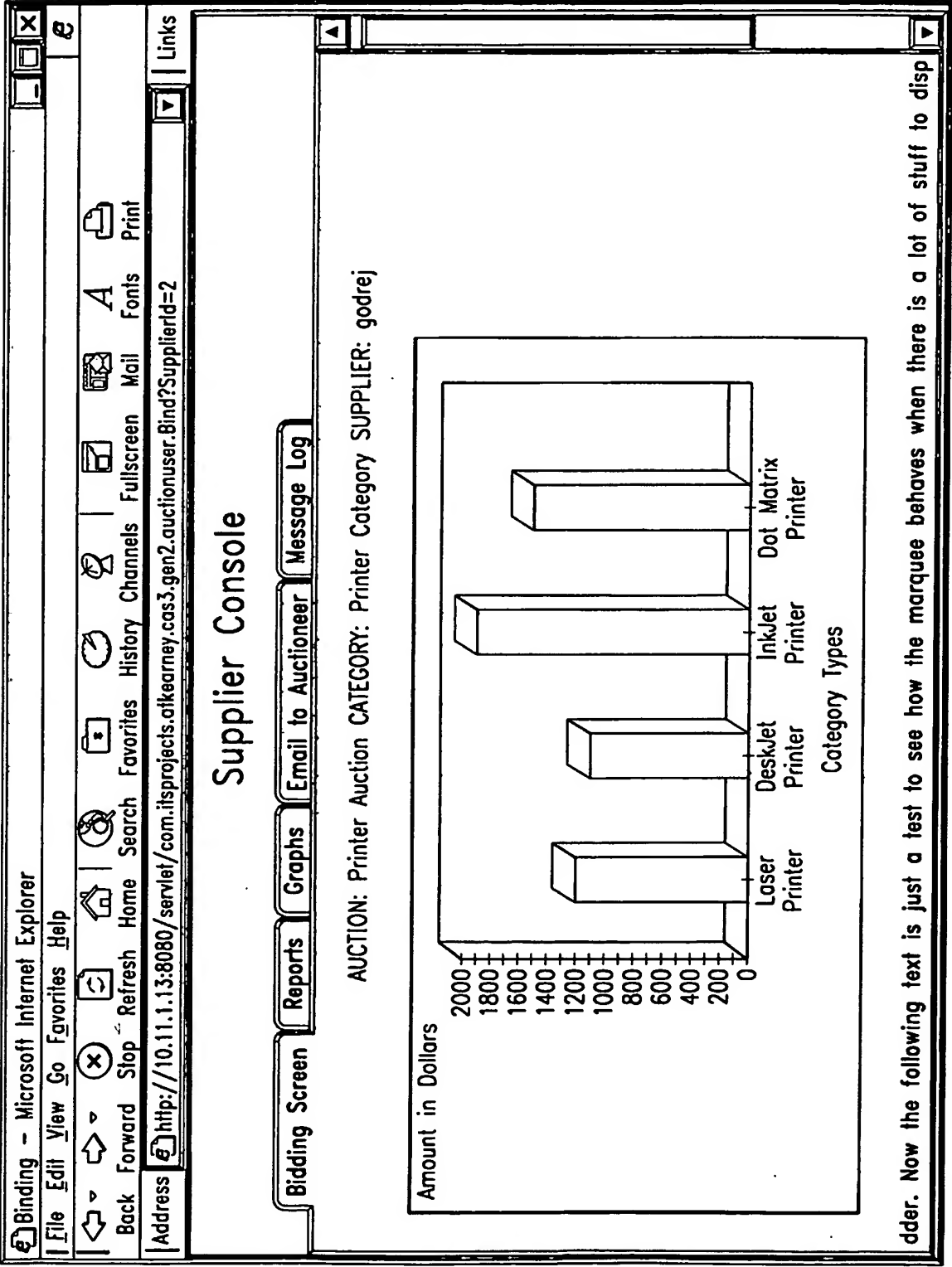
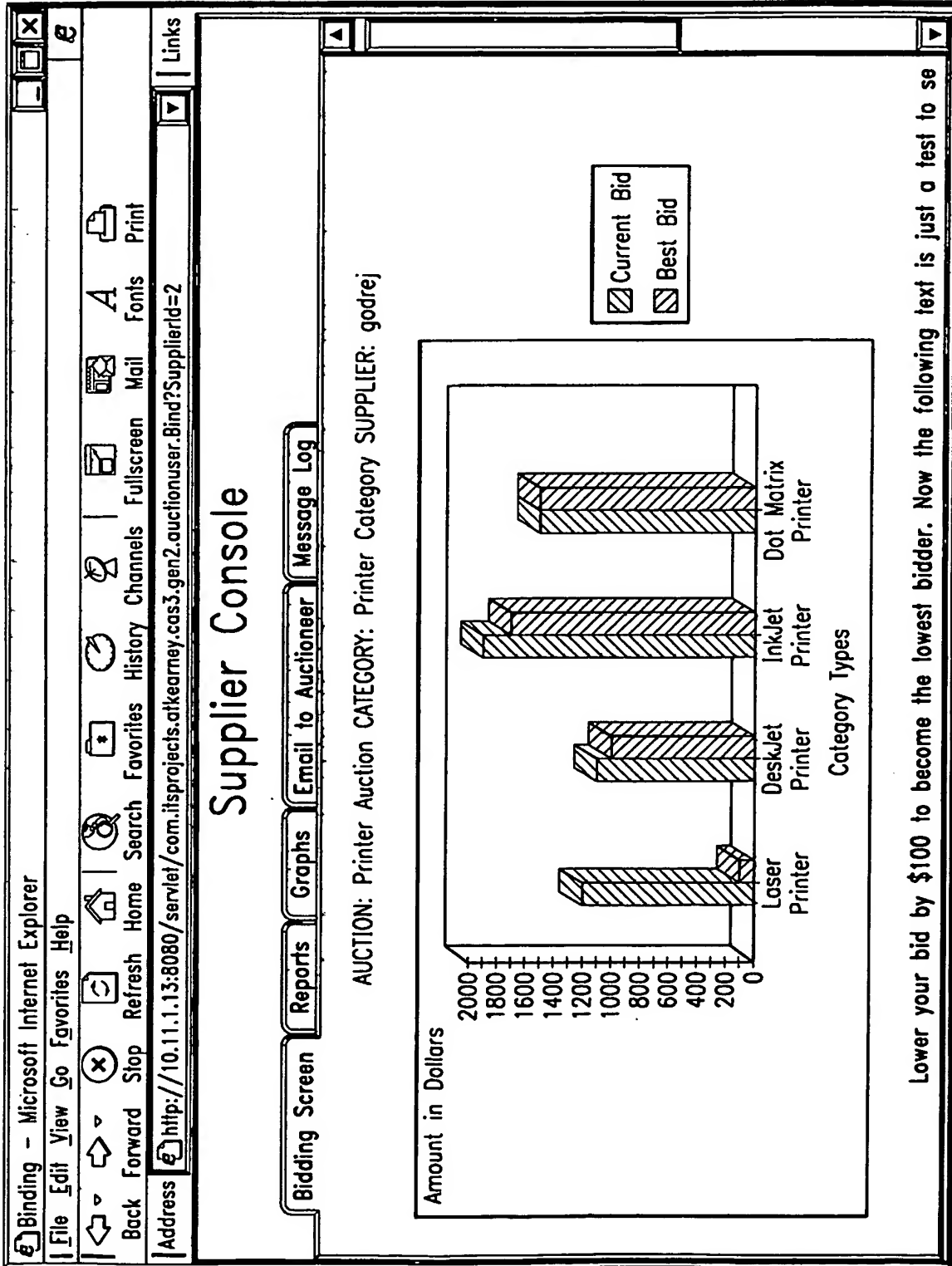


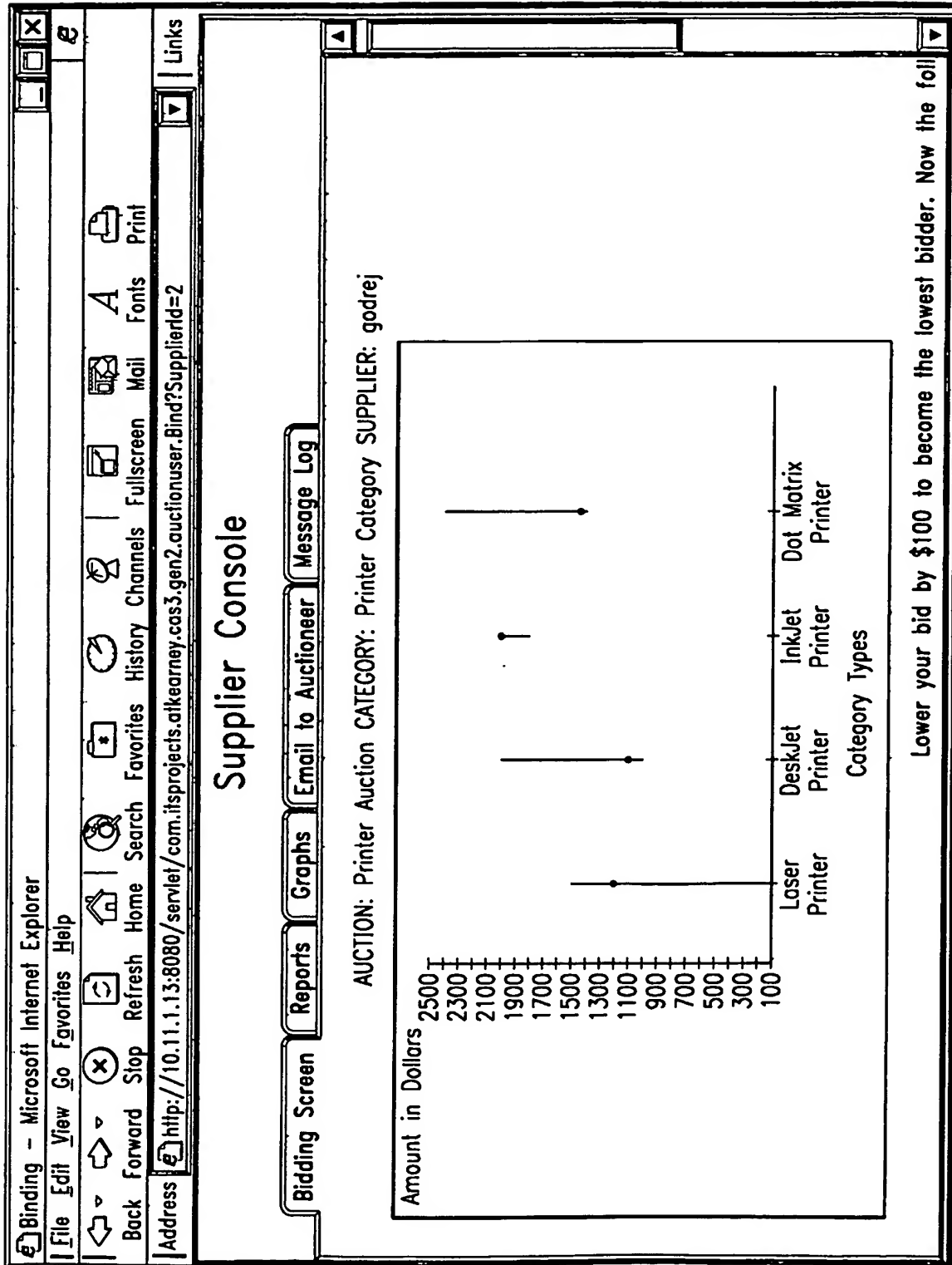
FIG. 32



38/41

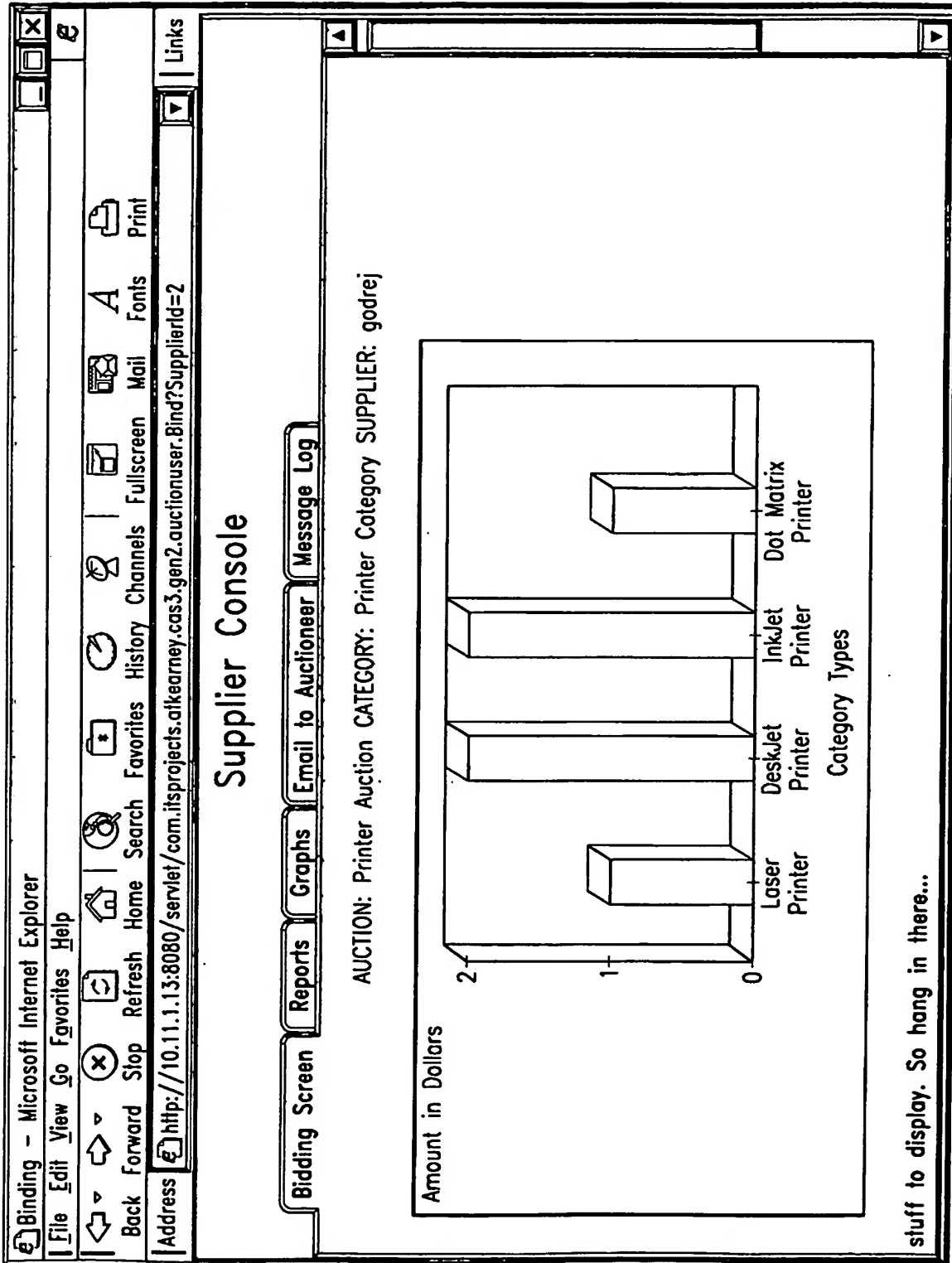
FIG. 33



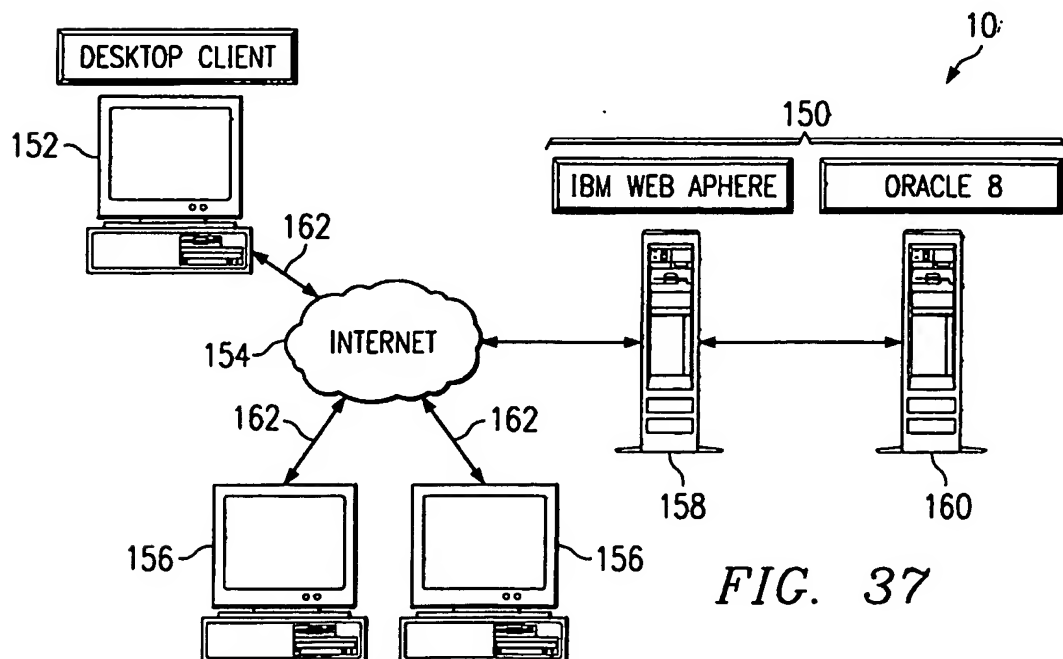
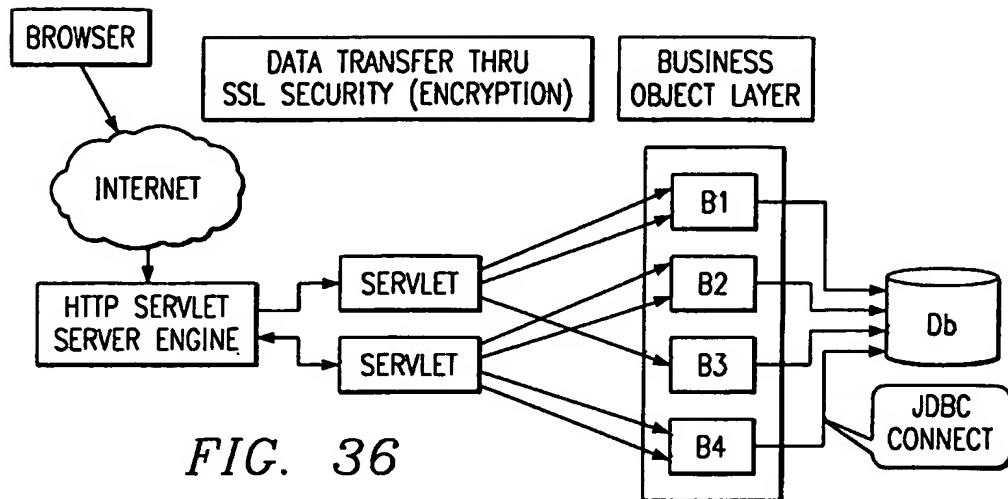


40/41

FIG. 35



41/41



```

      #####
      #
      #
      #
#     #
#     #
#     #
#####

      ###
      #
      #
      ##
#   # #
#   #
#####

      #####
      #   #
      #
      #
      #   ###
      #   #
      #   #
      #####

```

Print Job For:

```

#####   ###   ###   #
#   #   ##   ##
#       ##   ##   ###   #####
#       #   #   #   #   #
#       #   #   #   #   #
#       #   #   #   #   #
#   #   #   #   #   #   #
###   ###   ###   #####   ###   #####   ##   ##

#####   ###   #   #   #   #   #   #   #
#   #   #   #   #   #   #   #   #   #
#   #   #   #   #   #   #   #   #   #
#   #   #   #   #   #   #   #   #   #
#   #   #   #   #   #   #   #   #   #
#   #   #   #   #   #   #   #   #   #
#####   #####   #####   #####   #####

```

Spooled By: CMitchell

Job Number: 42

Date Printed: 7/30/2004

Time Printed: 10:00:06 AM

REVISED VERSION

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
5 July 2001 (05.07.2001)

PCT

(10) International Publication Number
WO 01/48656 A2

- (51) International Patent Classification⁷: G06F 17/60
- (21) International Application Number: PCT/US00/34022
- (22) International Filing Date:
14 December 2000 (14.12.2000)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/173,573 29 December 1999 (29.12.1999) US
- (71) Applicant: EBREVIATE, INC. [US/US]; Attn: Intellectual Property, Legal Affairs, 5400 Legacy Drive, H3-A3-05, Plano, TX 75024 (US).
- (72) Inventors: SLAIGHT, Thomas, H.; 41 Walworth Avenue, Scarsdale, NY 10583 (US). NORMAN, Alan, R.; 20 Gowan Lane, Aurora, Ontario L4G 4X6 (CA). KING, Philip, W., IV; 289 Broadway Avenue, Toronto, Ontario M4P 1W2 (CA). BURTON, Niul, A.; 3059 Sandstone Road, Alamo, CA 94507 (US).
- (74) Agent: PAGE, Steven, L.; Electronic Data Systems Corporation, H3-3A-05, 5400 Legacy Drive, Plano, TX 75024 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with declaration under Article 17(2)(a); without abstract; title not checked by the International Searching Authority
- (48) Date of publication of this revised version:
11 April 2002
- (15) Information about Correction:
see PCT Gazette No. 15/2002 of 11 April 2002, Section II
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SOURCING SYSTEM AND METHOD

(57) Abstract:

WO 01/48656 A2

PATENT COOPERATION TREATY

PCT

DECLARATION OF NON-ESTABLISHMENT OF INTERNATIONAL SEARCH REPORT

(PCT Article 17(2)(a), Rules 13ter.1(c) and Rule 39)

Applicant's or agent's file reference 014208.1398	IMPORTANT DECLARATION	Date of mailing(day/month/year) 12/11/2001
International application No. PCT/US 00/ 34022	International filing date(day/month/year) 14/12/2000	(Earliest) Priority date(day/month/year) 29/12/1999
International Patent Classification (IPC) or both national classification and IPC G06F17/60		
Applicant EBREVIATE INC.		

This International Searching Authority hereby declares, according to Article 17(2)(a), that no international search report will be established on the international application for the reasons indicated below

1. ☒ The subject matter of the international application relates to:
 - a. ☐ scientific theories.
 - b. ☐ mathematical theories
 - c. ☐ plant varieties.
 - d. ☐ animal varieties.
 - e. ☐ essentially biological processes for the production of plants and animals, other than microbiological processes and the products of such processes.
 - f. ☐ schemes, rules or methods of doing business.
 - g. ☐ schemes, rules or methods of performing purely mental acts.
 - h. ☐ schemes, rules or methods of playing games.
 - i. ☐ methods for treatment of the human body by surgery or therapy.
 - j. ☐ methods for treatment of the animal body by surgery or therapy.
 - k. ☐ diagnostic methods practised on the human or animal body.
 - l. ☐ mere presentations of information.
 - m. ☐ computer programs for which this International Searching Authority is not equipped to search prior art.

2. ☒ The failure of the following parts of the international application to comply with prescribed requirements prevents a meaningful search from being carried out:

☐ the description
☒ the claims
☐ the drawings

3. ☐ The failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions prevents a meaningful search from being carried out:

☐ the written form has not been furnished or does not comply with the standard.
☐ the computer readable form has not been furnished or does not comply with the standard.

4. Further comments: See additional sheets for details.

Name and mailing address of the International Searching Authority European Patent Office, P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Mark Quinn
--	---

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 203

The claims relate to subject-matter for which no search is required according to Rule 39 PCT. Given that the claims are formulated in terms of such subject-matter or merely specify commonplace features relating to its technological implementation, the search examiner did not establish any technical problem which might potentially have required an inventive step to overcome. Hence it was not possible to carry out a meaningful search into the state of the art (Art. 17(2)(a)(i) and (ii) PCT; see EPC Guidelines, Part B, Chapter VIII, 1-6).

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.